#### Project Hörnsten

#### Interface Specification Functional Document

Interface Name: Employee Master Data and Organizational Assignments Replication from Employee Central to SAP S/4HANA On Premise System

(Corporate and Eagle)

RICEFW ID: HR\_INT\_MUL1

Author: Darwin G. Noble

Version: 1.0

IBM | Lundin Mining

#### Document History

Document Location

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Design Authority Approval Details

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# General Information

|  |  |  |  |
| --- | --- | --- | --- |
| **RICEFW ID** | HR\_INT\_MUL1 | | |
| **Short Description** | Employee Master Data and Organizational Assignments Replication from Employee Central to SAP S/4HANA On Premise System  (Corporate and Eagle) | | |
| **Process Owner** |  | | |
| **Implementation Phase** | Realization (IT2) | | |
| **Transaction(s) (if applicable)** | ECPAO\_EE\_ORG\_REPL\_QUERY | | |
| **Run Frequency** | Every 1 hour | **Language** | English |

# Desired Functionality / User Story

Lundin Mining Corporate (Canada) and Eagle (US) HR uses the SAP SuccessFactors Employee Central as the system of record holding HR data including employees’ master data, organizational assignments, and organizational data. Existing processes such as Finance, Enterprise Asset Management (EAM), and Supply Chain Management (SCM) still run in an SAP S/4HANA system landscape. Therefore, the HR data maintained in Employee Central needs to be replicated to the SAP S/4HANA system to support the local processes running there.

## Business Benefits

Integrating SAP S/4HANA On Premise system with Employee Central using the Core Hybrid Deployment Option offers the following business features:

* The replication converts the data from Employee Central to the SAP S/4HANA data model.
* Employee master data replication is automated.
* Employee master data and organizational data replication are complementary. Organizational assignments are replicated into the employee's Organizational Assignment (0001) infotype in SAP S∕4HANA.

## Scope

This object covers the integration of SAP SuccessFactors Employee Central with SAP S/4HANA system, particularly the data replication scenarios involving the following employee master data and organizational assignments.

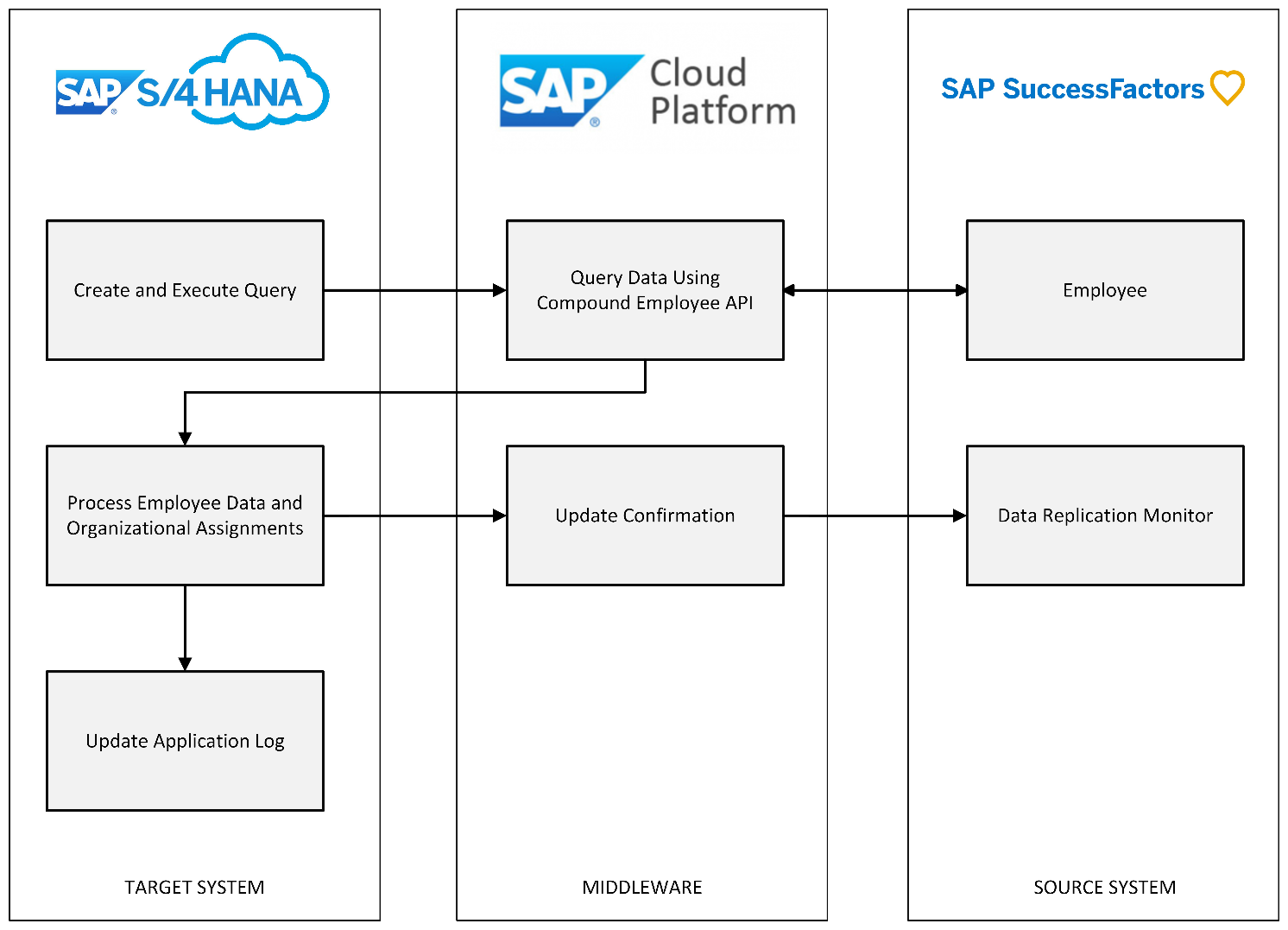
The HR infotypes in scope are as follows.

* 0000 – Actions
* 0001 – Organizational Assignment
* 0002 – Personal Data
* 0007 – Planned Working Time
* 0027 – Cost Distribution
* 0105 – Communication
* 1000 – Object
* 1001 – Relationships

Events in scope include:

* Hire
* Rehire
* Termination
* Transfer
* Promotion
* Demotion
* Position Change
* Job Change
* Data Change
* Leave of Absence
* Return to Work

## Process flow



Flow Diagram of the Replication Process of Employee Master Data and Organizational Assignments

**Employee Master Data and Organizational Assignments Replication Process**

1. The query program in the SAP S/4HANA system, *Create and Execute Employee Master Data and Org. Assignment Query* (ECPAO\_EE\_ORG\_REPL\_QUERY), initiates the replication process.

This program reads the parameters defined in the Business Integration Builder and triggers and outbound web service that sends the query to the middleware, the SAP Cloud Integration.

1. The middleware requests the corresponding data from Employee Central using the Compound Employee API.
2. The middleware calls the inbound web service in the SAP S/4HANA system to send the data it has received from Employee Central in packages to SAP S/4HANA.
3. The inbound web service triggers the processing of the employee data and organizational assignments in SAP S/4HANA.

The SAP S∕4HANA system creates or updates corresponding infotype records in Personnel Administration and Organizational Management and updates the application log.

The processing of employee master data and organizational assignments triggers the outbound web service which passes over the corresponding success or error confirmation to the middleware.

1. The SAP Cloud Integration updates the Employee Central Data Replication Monitor.

## Solution Details

|  |  |
| --- | --- |
| Data Source System: | SAP SuccessFactors Employee Central |
| Data Target System: | SAP S/4HANA |
| Direction  *(with respect*  *to S/4HANA)* | |  |  |  |  | | --- | --- | --- | --- | | X | Inbound | Interface data flows inbound to S/4HANA | | |  | Outbound | Interface data flows outbound from S/4HANA | | |  | Other | Specify: |  | |  | | | |
| Interface  Type | |  |  |  |  | | --- | --- | --- | --- | | X | Batch | One-way transfer of “accumulated” data set; Usually done by scheduled file transfer. | | |  | Near Real-Time | One-way message-based transfer of data; Usually triggered by event. | | |  | Real-Time | Immediate transfer of small data set; Usually triggered by event. | | |  | Excel Upload | Manually invoked from SAP session; Local spreadsheet file uploaded from PC. | | |  | Other | Specify: |  | |  | | | |
| Interface  Frequency | |  |  |  |  | | --- | --- | --- | --- | | X | Hourly | Details: |  | |  | Daily | Details: |  | |  | Weekly | Details: |  | |  | Monthly | Details: |  | |  | Quarterly | Details: |  | |  | Yearly | Details: |  | |  | On-Demand | How often: |  | |  | Other | Specify: |  | |  | | | |
| Type of  Records  Sent | |  |  |  |  | | --- | --- | --- | --- | |  | Full record load | Send all records every time interface is executed | | | X | Delta full records | Only send records where one or more fields have changed since previous execution | | |  | Delta records | Only send fields (and keys) that changed since previous interface execution | | |  | Other | Specify: |  | |  | | | |
| Volume  *(per single*  *execution)* | |  |  | | --- | --- | | Average Volume: | <Volume> records per interface execution | | Peak Volume: | <Lower Volume – Upper Volume> | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. Quality of Legacy Data: | N/A | ( ) Good | ( ) Average | ( ) Poor |  |
| 1. Complexity of Legacy Data: | N/A | ( ) Simple | ( ) Average | ( ) Complex |  |
| 1. Complexity of a Manual Input: | N/A | ( ) Simple | ( ) Average | ( ) Complex | ( ) Extra-complex |
| 1. Number of SAP Screens: | N/A | # screens | | | |

## Mapping and business rules

Mapping and business rules can be found in this SharePoint location <link>.

## Initiating Process / Process Type / Transaction / Program

The replication process starts with the execution of query program **ECPAO\_EE\_ORG\_REPL\_QUERY** (*Create and Execute Employee Master Data and Org. Assignment Query*), which is scheduled as a regular background job.

## Impact to Markets

This interface shall have no impact to global or local markets.

## Translation Requirements

The English language shall be used in the data replication. No language translations are needed.

# Middleware Solution

The **SAP Cloud Integration** shall be used as the middleware for the combined employee master data and organizational assignment replication from SAP SuccessFactors Employee Central to SAP S∕4HANA.

Replication of employee master data and organizational assignments from from Employee Central uses the following integration package and integration flow:

|  |  |
| --- | --- |
| **Integration Package** | **Integration Flow** |
| SAP SuccessFactors Employee Central Integration with SAP ERP or SAP S/4HANA: Employee and Organizational Data | Replicate Employee Master Data and Org. Assignments from SAP SuccessFactors Employee Central to SAP ERP or SAP S4HANA  *This integration flow is triggered by the Create and Execute Employee Master Data and Org. Assignment Query (ECPAO\_EE\_ORG\_REPL\_QUERY) program in the SAP S∕4HANA system. The integration flow calls the CompoundEmployee API of Employee Central to get the relevant data. Then it sends back the result to the SAP S∕4HANA system in the XML format, without further processing. The middleware also sends a notification to the SAP S∕4HANA system in the SOAP format, which informs SAP S∕4HANA about the success or failure of the query in Employee Central.* |
| SAP ERP or SAP S/4HANA Integration with SAP SuccessFactors Employee Central: Confirmation v2 | Send Confirmations from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central  *This integration flow updates the Employee Central Data Replication Monitor.* |
| SAP SuccessFactors Employee Central Integration with SAP ERP or SAP S/4HANA: Push Notification | Push Employee Master Data from SAP SuccessFactors Employee Central to SAP ERP or SAP S4HANA  *This integration flow can be used to trigger the data replication immediately from Employee Central for certain job events.* |

# Design Considerations for Developers

This interface shall be implemented using the Business Integration Builder configuration framework, with the help of SAP’s standard integration guide, [*Replicating Employee Master Data and Organizational Assignments from Employee Central to SAP S/4HANA On Premise*](https://help.sap.com/doc/b2bfe840544e4edcb2875accbcf39f57/2205/en-US/SF_EC_S4_EE_Data_Org_Assignm_HCI_en-US.pdf).

**Web Services**

This interface uses the following inbound and outbound web services.

* **getEmployeeMasterDataAndOrgAssignmentBundleReplicationQuery\_Out**

*This SAP S∕4HANA outbound service triggers data replication from Employee Central. It contains a query that is based on the configuration made in the SAP S∕4HANA system. The service first reaches the middleware, which then triggers a Compound Employee API call to query the data from Employee Central.*

*The service has a ProcessingParameter node, which contains a list of the processing parameters you have configured in SAP S∕4HANA.*

* **EmployeeMasterDataAndOrgAssignmentBundleReplicationRequest\_In**

*This SAP S∕4HANA inbound service returns information back to the SAP S∕4HANA system. It either contains the response, that is, the result of the query made to Employee Central in the Base64 XML format. Or it contains a notification, that is, status information about the query, together with general, employee-independent error information. Note that either the response or the notification are transferred, but not both together.*

*The service also contains the time stamp of when the Compound Employee API started processing. This time stamp is used to determine the last modified date for the next call.*

*The service also has a ProcessingParameter node, which contains a list of parameters from Employee Central. You can use these parameters to further control the processing.*

* **EmployeeMasterDataReplicationConfirmation\_Out**

*This SAP S∕4HANA outbound service updates the Employee Central Data Replication Monitor with information about whether data transfer to the SAP S∕4HANA system was successful or not.*

* **EmployeeMasterDataAndOrgAssignmentPushNotification\_In**

*This SAP S∕4HANA inbound service tells the SAP S∕4HANA that a push event was carried out in Employee Central that is relevant for the SAP S∕4HANA system. The notification contains the list of employees, that is, a list of user IDs or external person IDs. It also contains the transformation template group to be used in SAP S∕4HANA.*

**Programs**

* **ECPAO\_EE\_ORG\_REPL\_QUERY**, Create and Execute Employee Master Data and Org. Assignment Query

This program reads the settings and parameters defined in the Business Integration Builder and triggers the outbound web service to request employee master data and organizational assignments from Employee Central.

**Tables**

* **ECPAO\_QRY\_ADM**, Administration of Employee Master Data and Org Assign. Query

*This table stores an entry for each run of the program, that is, for each query.*

* **ECPAO\_QRY\_ADMDT**, Selection Parameters for EE Master Data and Org. Ass. Query

*This table stores the parameters you entered on the selection screen of the program.*

**Transaction Codes**

* **ECPAO\_EE\_ORG\_QUERY**, Create and Execute Employee Master Data and Org. Assignment Query

Program: ECPAO\_EE\_ORG\_REPL\_QUERY

* **ECPAO\_RESET\_QRY\_ADM**, Reset Query Administration Table

Program: ECPAO\_EE\_ORG\_RESET\_QRY\_ADM

* **ECPAO\_DEL\_QRY\_ADM**, Delete Queries from Admin Table

Program: ECPAO\_DEL\_EE\_ORG\_QRY\_ADM

# Integration Impacts

This interface shall have impact to business processes in SAP S/4HANA that use HR infotype data.

# SAP Data Archiving Access Requirements

This section is not applicable as data archiving is out of scope.

|  |  |
| --- | --- |
| Data Archiving | Data Archiving is the process used to delete data that is no longer needed from online database and storing same in an external storage that allows for data retrieval and analysis when need be.  Data that have been archived cannot be changed/updated. |
| Residency Time | The period of time that the document is stored in the online database before the document can be archived. Usually, the archiving process checks the last changed date to calculate the residency time. |
| Retention Time | The total period of time that a document exists in the online database + archived storage until it is required to be destroyed. From document creation to document’s end-of-life. |

|  |
| --- |
| 1. Will access to data older than 2 years be required?  YES  No |
| 1. If YES to question 1:    1. Will the data older than 2 years need to be updated. Why? What process would require this update, please specify?    2. Please specify reason / explain the need for these data required? Please check all that applies.   Legal requirement:  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    Business  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Tax  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Audit  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Others: Specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Please indicate the type of data used in this FSD     Shipments  Shipment Costs  Deliveries  SD Billing documents  Sales documents  Material Documents  Purchase Orders  Purchasing Requisitions  Financial Documents  Material Ledger  COPA  Handling Units  Others:  Please specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

| **Comments/Notes** |
| --- |
| N/A |

# Acceptance Criteria

1. Employee master data and organizational assignments from Employee Central are successfully replicated in corresponding HR infotypes in SAP S/4HANA.
2. On initial run, all employee master data and organizational assignments from Employee Central are successfully replicated in SAP S/4HANA.
3. On succeeding runs (delta), changes to employee data, such as personal info, job info, assignments, etc., are successfully replicated in SAP S/4HANA.
4. HR events or actions in Employee Central such as hire, rehire, termination, etc., are successfully replicated in SAP S/4HANA.
5. Monitoring tools, including the Data Replication Monitor in Employee Central, Application Log (SLG1) in SAP S/4HANA, and SAP Cloud Integration Monitoring UI, reflects the statuses of replication runs.

# Assumptions

1. Transport management shall be handled by Lundin Mining’s Basis Team or Illumiti.
2. Activation of web services shall be handled by Lundin Mining’s Basis Team or Illumiti.
3. Authorizations and permissions shall be assigned by Lundin Mining’s Basis Team or Illumiti.
4. Regular background jobs shall be defined and scheduled by Lundin Mining’s Basis Team or Illumiti.
5. There shall be one Change Number for each interface, to be taken care of [Jose Marin Gaete](mailto:jose.marin@lundinmining.com).

# Error Handling/Monitoring Requirement

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Error Handling Detail: Provide details here, if additional information is required.

If this has been identified as a business-critical process, then special job run notifications or error notifications or E-Mail messaging or custom programming may be required to ensure smooth business operation*.* ***>* END OF GUIDANCE TEXT**

## Error Conditions and Logging

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Specify the error conditions under which the program should abort the control. Please describe the general requirements here and provide the escalation steps in the next section. Elaborate on issues like: If the program fails half way through, will this have any impact on any programs to be run after its completion? **> END OF GUIDANCE TEXT**

## Notification

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Use this section to detail how the error should be handled. This may include a fix and a restart, manually editing a message, or it can be restarted automatically. If a common technique is used, please describe how the program/object will use it. For example, if there is a standard email system, what parameters would be used. Use the next section to elaborate on restart procedures if necessary. **> END OF GUIDANCE TEXT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Error** | How error message should be reported | **Error Messages** | **Corrective action** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Restart / Recovery

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Use this section to detail how the error should be handled. This may include a fix and a restart, manually editing a message, or it can be restarted automatically. If standard error notification is to be used, write “standard” in the second column. Include external errors such as a short dump due to a database or spool issue. That is, in the event of a catastrophic system wide error, what is the restart procedure?. **> END OF GUIDANCE TEXT**

## Monitoring Requirements

**SAP S/4HANA**

* Analyze Application Log (SLG1) transaction can be used to analyze the incoming messages for employee master data and organizational assignment replication from Employee Central in SAP S∕4HANA system.
* Web Service Utilities (SRTUTIL) transaction offers an Error Log and a Message Monitor tool, which can be used, for example, to analyze errors in incoming SOAP messages or check the content of messages.
* Verbose Logging can be enabled in the query program while scheduling or executing this report in the front end for additional more detailed messages. The verbose logs can be checked for an employee in SLG1 by using the external employee ID. This option is meant only for testing purpose and is not supposed to be enabled for mass replications.
* Simulation Mode can be enabled in the query program to perform a preview testing of replication to check for any possible errors before performing an actual replication.
* Replication Request Monitor (SFIUI\_A\_REPL\_REQ\_MONITOR) Web Dynpro application allows users to check replication requests for organizational objects and organizational assignments in all details, analyze error message issued by the replication from Employee Central, and process replication requests manually.
* Display Employee Org. Assignment Replication Requests (SFIOM\_VIEW\_REQUESTS) transaction allows access to the staging area for organizational assignments in SAP S∕4HANA to check statuses or process requests manually.
* Analyze Inventory of Replicated Employee Data (ECPAO\_EMPL\_INVENTORY\_ALV) report queries all the success and error scenarios when extracting the employee data or organizational data from SAP SuccessFactors Employee Central (EC) to SAP S∕4HANA system. This helps in troubleshooting any issues, which can occur when you import the data using web service transfer.

**SAP Cloud Integration**

* 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.

**Employee Central**

* Employee Central Data Replication Monitor is an admin tool in Employee Central which can be used to check the replication status, view alerts, and analyze error messages related to data replication from Employee Central to SAP S∕4HANA.
* SFAPI API Audit Log can be used to monitor API calls to Employee Central

# Security Requirements/ Authorization Details

**SAP S/4HANA**

The following template roles are available for the replication of employee master data and employee organizational assignments from Employee Central:

1. **SAP\_HR\_ECPAO\_BIB\_WEBSERVICES**, Employee Master Data and Org Assignment Replication from EC - Technical User

This role is meant for a technical user of type B (System User). It authorizes the user to carry out tasks such as the following:

* Execute the inbound web services EmployeeMasterDataAndOrgAssignmentBundleReplicationRequest\_In and EmployeeMasterDataAndOrgAssignmentPushNotification\_In
* Process replication requests and store the replicated employee master data in the relevant infotypes
* Access the query administration tables (ECPAO\_QRY\_ADM and ECPAO\_QRY\_ADMDT)

1. **SAP\_HR\_ECPAO\_BIB\_PROCESSING**, Employee Master Data and Org Assignment Replication from EC - Business User

This role is meant for a business user. It authorizes the user to carry out tasks such as the following:

* Query employee master data and organizational assignments from Employee Central
* Reset employee master data and organizational assignment queries
* Delete employee master data and organizational assignment queries from the query administration tables
* Monitor the replication using the inventory programs
* Delete entries from the inventory tables
* Use the application log to analyze errors

1. **SAP\_HR\_SFIOM\_PROCESSING**, Organizational Data Replication from Employee Central - Business User

This role is also meant for the business user. It contains the permissions the user needs to process organizational assignments in SAP S∕4HANA. The role authorizes the user to carry out tasks such as the following:

* Process and delete replication requests for organizational assignments
* Monitor the replication using the Replication Request Monitor and the Replication Request Viewers

**SAP SuccessFactors**

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

|  |  |  |
| --- | --- | --- |
| **Role** | **Permission Location** | **Permission name** |
| User | General User Permissions | SFAPI User Login |
| Administrator | Employee Central API | Employee Central Foundation SOAP API |
| Administrator | Employee Central API | Employee Central HRIS SOAP API or Employee Central Compound Employee API (restricted access) |
| Administrator | Employee Central API | Employee Central Foundation OData API (read-only) |
| Administrator | Employee Central API | Employee Central HRIS OData API (read-only) |
| Administrator | Employee Central API | Employee Central Foundation OData API (editable) |
| Administrator | Employee Central API | Employee Central HRIS OData API (editable) |

**TEXT TO BE REMOVED, GUIDANCE ONLY<**Please describe any specific security requirements**>**

**END OF GUIDANCE TEXT**

To be filled by FSD Author in case SAP Transaction is used

RICEF is used to update, display or print data? Please capture the details here:

|  |  |
| --- | --- |
| X | Update |
| X | Display |
|  | Print |
|  | All |

Please indicate which SAP module the RICEF applies to.

|  |  |  |  |
| --- | --- | --- | --- |
| Module | Check (X) | Module | Check (X) |
| MM |  | PP |  |
| WM |  | FI |  |
| SD |  | CO |  |
| PM |  | BI |  |
| XI |  | Security |  |
| Master Data | *HR* | ABAP |  |
| Other | *Please Specify* |

Please indicate which scenario, process and process steps the RICEF impacts since the BPML will be updated in line with the security change.

|  |  |
| --- | --- |
|  | **Description** |
| Scenario | *Scenario (exact name as appears in BWL)* |
| Process | *Process (exact name as appears in BWL)* |
| Process Step(s) | *Process Step(s) (exact name as appears in BWL)* |

Please give a brief description of the functionality the RICEF is used for?

e.g. RICEF01357 - The program is used to create and print (PDF form or ALV) sampled physical inventory list. Program copied from J\_3R\_LF\_INV3\_19 and modified . Or

e.g. RICEF02006 - Copy of standard MB25 report with additional Modification of Adding 3 text fields.

Please specify

RICEF needs additional authorization checks on already known organizational levels (e.g. company code, purchasing organization, plants etc.)?

|  |  |
| --- | --- |
|  | Yes |
|  | No |

When answer yes, the following organizational levels need to be checked:

|  |  |
| --- | --- |
| Organizational levels | Check (X) |
| Company Code | *TBD* |
| Cost Center | *N/a* |
| Profit Center | *n/a* |
| Sales Organization | *Na* |
| Purchasing Organization | *Na* |
| Plants | *Na* |
| Other | *Please Specify* |
|  |  |
|  |  |

To be filled by Security Team / Development Team

Additional security requirements needed? (to be filled by security)

|  |  |  |
| --- | --- | --- |
|  | Yes | Proceed in filling the requirements – Developers to implement security requirements |
|  | No | No further information needed – No implementation of additional security requirements needed. |

Information for developer to implement security requirements in RICEF:

Authorization group to be assigned to report / program (to be filled by developer)

|  |
| --- |
|  |

RICEF is started by using an SAP transaction (to be filled by developer)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Custom SAP Transaction | Name: |  | |
|  | None |
| Transaction type *(only to be filled when transaction is used)* | | | |
|  | Report transaction |
|  | Parameter transaction |

Does the report call another custom or standard transaction? (to be filled by developer)

|  |  |  |
| --- | --- | --- |
|  | Yes | Name: |
|  | No |  |

RICEF needs to have additional authorization checks included? (to be filled by security)

|  |  |  |
| --- | --- | --- |
|  | Yes | Organizational segregation needed – e.g. Report is able to access data from all market units |
|  | No | Organizational segregation not needed – e.g. Report only handles market unit specific data |

When answer is yes, please implement the following authorization check in the RICEF before any data is displayed or manipulated:

|  |  |  |
| --- | --- | --- |
| Authorization object | Authorization field: | Authorization values |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Information for security to setup relation between transactions and implemented authorization checks:

RICEF is using standard components and already has included authorization checks? (to be filled by developer)

|  |  |  |
| --- | --- | --- |
|  | Yes | Includes standard components with standard authorization checks |
|  | No | do not include standard authorization checks or is called by standard transactions. |

When answer yes, the following authorization objects need to be maintained in SU24:

|  |  |  |
| --- | --- | --- |
| Authorization object | Authorization field: | Authorization values |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Controls Impacts

**TEXT TO BE REMOVED, GUIDANCE ONLY<**Describe impacts to controls or design considerations or feedback

related to controls.>**END OF GUIDANCE TEXT**

This integration employs standard monitoring tools (as detailed in Section 9) which provides information about the data replication results, allows users to take corrective actions, and features automatic and manual reprocessing. These tools can help in troubleshooting, error handling, and ensuring data integrity between Employee Central and SAP S/4HANA systems. These SAP-delivered tools shall have no impact to other business processes.

# Issues

**TEXT TO BE REMOVED, GUIDANCE ONLY****<**This section should be used like a log during the creation of this document to outline any outstanding issues that need to be resolved prior to continuing with the development work. Prior to sign-off there should be no issues remaining.

**>** **END OF GUIDANCE TEXT**

| **Issue #** | **Date Raised** | **Issue Description** | **Issue Resolution** |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

# Dependencies

1. SAP S/4HANA system has been setup.
   * SAP S/4 HANA on premise is installed.
     + S4CORE 100 (SAP S/4HANA 1511 or a higher version/feature pack)
     + EA-HR 608 (minimum, initial delivery version, no SP required)
   * Integration add-on for SAP S∕4HANA and SAP SuccessFactors Employee Central is installed.
     + PA\_SE\_IN 100 SP33
   * The Basic Settings in the Business Integration Builder is configured.
   * Inbound and outbound web services are activated.
   * Technical users are created.
   * HCM Mini Master is configured.
2. Employee Central system has been setup.
   * Data models and metadata are configured.
   * Organization is setup.
   * Number ranges are defined.
3. SAP Cloud Integration has been setup.
   * Integration packages and flows are installed and deployed.
   * SAP Cloud Connector is setup.
   * The connection between SAP Cloud Connector and SAP Business Technology Platform has been established.
4. The required SAP Notes are implemented and have the up-to-date versions.
5. The required authorizations and permissions are granted to technical and business users.

# 

# Unit Test Plan

**TEXT TO BE REMOVED, GUIDANCE ONLY <Test Condition** – Unit Test Process to be defined **> END OF GUIDANCE TEXT**



## Key Test Conditions

**TEXT TO BE REMOVED, GUIDANCE ONLY <**Identify methods to verify that the object worked properly such as reports, other transactions, etc.

Identify key business testing conditions. Specifically identify test conditions related to the business requirements, key logic branches, key data variations, etc. Full Assembly test conditions will be captured in HPQC/Worksoft. **> END OF GUIDANCE TEXT**

| **Test Condition** | **Step** | **Step Description** | **Test Data** | **Expected Result** | **Actual Result** | **Executed By/Date** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Hire an employee |  |  |  | An employee has been hired. |  |  |  |
| 1. Rehire an employee |  |  |  | An employee has been rehired. |  |  |  |
| 1. Terminate an employee |  |  |  | Employee is inactive in S4 |  |  |  |
| 1. Perform Leave of Absence |  |  |  | Employee is inactive in S4 |  |  |  |
| 1. Perform Return to Work |  |  |  | Employee is activated in S4 |  |  |  |
| 1. Change in Org Assignment |  |  |  | Changes are replicated in the infotype framework in S4. |  |  |  |
| 1. Change in Personal Information |  |  |  | Changes are replicated in the infotype framework in S4. |  |  |  |
| 1. Change in Planned Working Time |  |  |  | Changes are replicated in the infotype framework in S4. |  |  |  |
| 1. Change in Cost Distribution |  |  |  | Changes are replicated in the infotype framework in S4. |  |  |  |
| 1. Change in Communication |  |  |  | Changes are replicated in the infotype framework in S4. |  |  |  |

## Technical Test Conditions

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Identify any special technical test conditions. **> END OF GUIDANCE TEXT**

| **Test Condition** | **Step** | **Step Description** | **Test Data** | **Expected Result** | **Actual Result** | **Executed By/Date** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Replicated organizational data |  | Execute report RH\_SFIOM\_ORG\_OBJ\_REPL\_QUERY. |  | The staging area tables are updated. |  |  |  |
| 1. Replicate employee master data |  | Execute report ECPAO\_EE\_ORG\_REPL\_QUERY. |  | The Replication for Employee Master Data has been processed. |  |  |  |
| 1. Replicate Organizational Assignments |  | RH\_SFIOM\_PROC\_EE\_ORG\_ASS\_RPRQ |  | The Replication for Organizational Assignments has been processed. |  |  |  |
| 1. Status Check of Organizational Data Replication |  | Execute report RH\_SFIOM\_RESET\_QRY\_ADM. |  | The Status of the Queries for the Organizational Objects has been checked. |  |  |  |
| 1. Status Check of Employee Replication |  | Execute report ECPAO\_EE\_ORG\_RESET\_QRY\_ADM |  | The Status of the Queries for the Employee Master Data and Org. Assignment has been checked. |  |  |  |
| 1. Status Check of Staging Area for Organizational Objects |  | Execute report RH\_SFIOM\_VIEW\_ORG\_STRUC\_RPRQ |  | The Replication Requests for Organizational Objects have been displayed. |  |  |  |
| 1. Status Check of Staging Area for Employee Organizational Assignments |  | Execute report RH\_SFIOM\_VIEW\_EE\_ORG\_ASS\_RPRQ |  | The Replication Requests for Employee Organizational Assignments have been displayed. |  |  |  |
| 1. Analyze Application Log |  | Execute transaction SLG1 |  | The Application Log to analyze the Replication of Organizational and Employee Data has been checked. |  |  |  |
| 1. Check Replicated Infotypes |  | Execute transaction PA20 |  | Organizational Data, Personal Data and Address Data of the new hired Employee has been checked in the ERP HCM system. |  |  |  |

## Risk and Controls Test Conditions

**TEXT TO BE REMOVED, GUIDANCE ONLY <** Identify any test conditions needed to test any risks or controls that were identified. Work with PCS to identify these test conditions. **> END OF GUIDANCE TEXT**

| **Test Condition** | **Step** | **Step Description** | **Test Data** | **Expected Result** | **Actual Result** | **Executed By/Date** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

## Testing Considerations/Dependencies

**TEXT TO BE REMOVED, GUIDANCE ONLY <**Identify testing considerations and dependencies such as data requirements, prerequisite configuration, connectivity, etc. **> END OF GUIDANCE TEXT**

## Exception and Error Handling Test conditions

Exception - special logic or exceptions (e.g. do not process Government Markets customers, only process pre-packs)

| **Test Condition** | **Step** | **Step Description** | **Test Data** | **Expected Result** | **Actual Result** | **Executed By/Date** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Error Handling - functionality in case of errors (e.g. Customer not found, Record already exists)

| **Test Condition** | **Step** | **Step Description** | **Test Data** | **Expected Result** | **Actual Result** | **Executed By/Date** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |