#### Corteva CFIN

#### Technical Design Specifications

Special Purpose Ledger Tri-currency

29 April 2019

Version 1.0

Document Version History

|  |  |  |  |
| --- | --- | --- | --- |
| Version No | Version date | Author | Summary of Changes |
| **1.0** | 4/29/2019 | Revathi | Initial Draft 1.0 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Contents

[Project Identification 2](#_Toc5615118)

[Object Overview 3](#_Toc5615119)

[Source & Target Matrix 4](#_Toc5615120)

[1. Program Attributes 5](#_Toc5615121)

[2. Technical Flow Diagram 6](#_Toc5615122)

[3. Environment Details 6](#_Toc5615123)

[4. Business Requirements 7](#_Toc5615124)

[5. Processing Logic 8](#_Toc5615125)

[6. Reusable Code 12](#_Toc5615126)

[7. Internal Tables 12](#_Toc5615127)

[8. Messages 13](#_Toc5615128)

[9. Conversion List Output/ Reconciliation 13](#_Toc5615129)

[10. Assumptions in Technical Design 13](#_Toc5615130)

[11. Open Issues in Technical Design 13](#_Toc5615131)

[12.Unit Test Plan 14](#_Toc5615132)

[13.Transport Details 14](#_Toc5615133)

|  |  |  |
| --- | --- | --- |
| Project Identification | | |
| Project Name | Customer Name | EY Service Line |
| CFIN | DowDuPont Corteva | PI - Advisory |
| EY Delivery Manager | EY Engagement Manager | EY Project Manager |
| Kathy Denardo | Connie Fitting | Jeff Kurz |
| EY Technical Project Manager | Customer Technical Project Manager | EY Quality Manager |
| Adam Zeckel | Tim Hagg |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Object Overview | | | |
| Object ID | TDS\_E\_GL\_008\_ Special Purpose Ledger Tri-currency into CFIN from DCP | Business Process | Replicate accounting documents in CFIN (Central Finance) |
| Object Description | Bring data from Y4 ledger in DCP into CFIN | | |
| Cycle of Testing | C1 / C2 / C3 / C4 | Required Development Completion Date |  |
| Complexity of Object | High | Program run | Interface with batch jobs and manual intervention |
| Type of Conversion | Automated and Manual |  |  |
| TS Control | | | |
| TS Author | Revathi | Customer Process Owner |  |
| TS Approved By | Mahmud Amer | TS Approval date | 08042019 |
| Document Structure | | | |
| The TDS will be covering the below:   * Special Purpose Ledger in S4: Described in this main document in sections 1 to 13. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source & Target Matrix **Special Purpose Ledger Creation/Load:**   |  |  |  |  | | --- | --- | --- | --- | | **System** | **Application Name** | **Source** | **Destination** | | SAP | DCP - SAP | X |  | | SAP | CFIN |  | X | |

|  |
| --- |
| Program Attributes |
| |  |  | | --- | --- | | **Transaction Code** | N/A | | **Include Programs** | N/A | | **Function Modules** | N/A | | **Program title** |  | | **Program Name** |  | | **Program Type** |  | |  |  | |

|  |
| --- |
| Technical Flow Diagram |
| ETL program Flow   |  |  |  | | --- | --- | --- | |  |  |  | |

|  |
| --- |
| Environment Details |
| **Source System**: Special Purpose Ledger will be created as part of the CFIN solution. The GL team  will be providing ERP system source details to fetch all Special Purpose Ledger that will be created.  **Target System**: S4/ CFIN  **BODS Server**: DEV/ QA/ STG / PRD   |  |  |  | | --- | --- | --- | |  |  |  | |

|  |
| --- |
| Business Requirements |
| The purpose of this document Technical Design Specification for Special Purpose Ledger Mapping and Table Load is to describe the business requirement in fulfillment of its completion.  **MDG Requirements**   |  |  | | --- | --- | |  |  | |

|  |
| --- |
| Processing Logic BODS to SAP S/4HANA  This Document provides the technical approach taken for loading Special Purpose Ledger from legacy systems into SAP S4 HANA. Individual source mapping for required fields are defined in Mapping documents.  The Document aims at explaining the architecture of the JOB and its various components and flow of the data along with metadata and framework details being captured to the granular level. The Document shall act as an input to the developer working on the job to help him to understand and follow the defined process.  1.One-time Load – DCP Extract Creation  A batch created that extracts data from the YGLOBET table which is for one-time load,  This is only for the documents posted to the Y4 ledger, company code 1153,9524 and for documents posted to GL accounts in the range 00000000 to 99999999, then the extract would then be converted to CFIN values.  2.Daily Load – DCP Extract Creation  A batch created that extracts data from the YGLOBEA table which will run daily, just after the end of current system day, and pick up all documents with a creation date of the prior day (Ex. If the system time/date is EST, the job will run at 12:01am EST).  This is only for the documents posted to the Y4 ledger and for documents posted to GL accounts in the range 00000000 to 99999999, then the extract would then be converted to CFIN values.  And the extraction job is scheduled by management console to do extraction on daily basis at 12.01 am EST.  We are doing Functional Module the standard interface for data transfer.  For Special Purpose Ledger we have used the “F1606” function module. |
| **Job Details**     * **Job\_DM\_Special\_Ledger\_Onetime**: BODS-ETL job to extract, Validate, Enrich and loading the Special Purpose Ledger data to HANA using FM for one time. * **Job\_DM\_ Special\_Ledger\_Daily**: BODS-ETL job to extract, Validate, Enrich and loading the Special Purpose Ledger data to HANA using FM in daily basis.   **Conditionals details**   * **Extract:** This conditional is used to trigger the general data flow for Special Purpose Ledger extract from source systems. * **Transform:** This conditional is used to trigger the transformation data flow for Special Purpose Ledger to enrich the extracted data. * **Validate:** This conditional is used to trigger the validation data flow for Special Purpose Ledger to do validation checks. * **Load:** This conditional is used to trigger FM DFs inside it.   **Dataflow Details**   1. **DF\_Special\_Pupose\_Ledger\_Data\_Ext\_YGLOBET:** This DF will extract the relevant fields from the legacy system and stage the data into staging table for one time. 2. **DF\_Special\_Pupose\_Ledger\_Data\_Enrich\_YGLOBET:** Apply transformations on the fields as per the requirements for one time. 3. **DF\_Special\_Pupose\_Ledger\_Validate\_YGLOBET:** On the above staged data validation will be applied. Validation will be for validating lookups, Mandatory fields and formatting of the fields for one time. 4. **DF\_Special\_Pupose\_Ledger\_Load\_YGLOBET:** Enriched valid data tables from all the segments will be used to call the FM to load for one time. 5. **DF\_Special\_Pupose\_Ledger\_Data\_Ext:** This DF will extract the relevant fields from the legacy system and stage the data into staging table. 6. **DF\_Special\_Pupose\_Ledger\_Data\_Enrich:** Apply transformations on the fields as per the requirements. 7. **DF\_Special\_Pupose\_Ledger\_Validate:** On the above staged data validation will be applied. Validation will be for validating lookups, Mandatory fields and formatting of the fields. 8. **DF\_Special\_Pupose\_Ledger\_Load:** Enriched valid data tables from all the segments will be used to call the FM to load. 9. **DF\_ Special\_Pupose\_Ledger\_Checktables:** Stage all check tables data to staging tables for all 3 sites: Pioneer, Dow & DuPont. 10. **DF\_Special\_Pupose\_Ledger\_Delta:** This DF will extract the delta records from the legacy system and stage the data into staging table.   **Mapping Details**    **Validation Details**  Two types of validations are applied:  **Validate\_lookups:** To check whether the Fields/value exits in the lookup table or not   * DOCUMENT\_TYPE exists in “LKP\_ DOCUMENT\_TYPE” * COMPANY\_CODE exists in “LKP\_ COMPANY\_CODE” * COST\_CENTER exists in “LKP\_COST\_CENTER” * FUNCTIONAL\_AREA exists in “LKP\_ FUNCTIONAL\_AREA” * TRANSACTION\_TYPE exists in “LKP\_TRANSACTION\_TYPE” * PROFIT\_CENTER exits in “LKP\_ PROFIT\_CENTER” * PLANT exists in “LKP\_PLANT” * TRADING\_PARTNER exists in “LKP\_TRADING\_PARTNER”   **Validate\_Mandatory:** This is to validate whether the mandatory fields have data or not.   * POSTING DATE is not null. * COMPANY CODE Is not null * GL ACCOUNT is not null * DEBIT/CREDIT is not null * CURRENCY is not null   **Variables**   * $G\_Client: To store the default value * $G\_Date\_Format: Store the date format * $G\_Decimal\_Separator: store the default value * $G\_LoadDate * $G\_MessageType * $G\_ReceiverPartnerNumber * $G\_ReceiverPort * $G\_Time\_Format * $G\_GeneralData\_Req * $G\_ProfileMapTables: Variable to trigger the conditional for “profile mapping tables * $G\_SourceData\_Path: Variable to store the source location * $G\_Texts\_Req * $G\_GeneralData\_IDoc\_Req * $G\_SourceID * $G\_Stop\_Job\_If\_Invalid\_Data\_Exists |

|  |
| --- |
| Reusable Code |
| This Job can be reused if the same criteria comes for other releases. |

|  |
| --- |
| Internal Tables |
| |  |  |  | | --- | --- | --- | |  |  |  | | * TT\_SPL\_LDGR\_YGLBT\_EXT * TT\_SPL\_LDGR\_YGLBT\_TRANS * TT\_SPL\_LDGR\_YGLBT\_VALID * TT\_SPL\_LDGR\_YGLBT\_INVALID * TT\_SPL\_LDGR\_YGLBT\_LOAD * TT\_SPL\_LDGR\_YGLBA\_EXT * TT\_SPL\_LDGR\_YGLBA\_TRANS * TT\_SPL\_LDGR\_YGLBA\_VALID * TT\_SPL\_LDGR\_YGLBA\_INVALID * TT\_SPL\_LDGR\_YGLBA\_LOAD * TT\_SPL\_LDGR\_YGLBA\_DELTA * TT\_SPL\_LDGR\_CHECK\_TABLES |  |  | |

|  |
| --- |
| Messages |
|  |

|  |
| --- |
| Conversion List Output/ Reconciliation |
| 1. Compare YGLOBEA/YGLOBET table between SAP source system and CFIN. Analyze the differences and the reasons. 2. Validate the mapping table in CFIN |

|  |
| --- |
| Assumptions in Technical Design |
| * All Special Purpose Ledger will be fetched from source system (based on specified criteria) and shared with the functional team. Load input file * Company Codes already exist in S4. |

|  |
| --- |
| Open Issues in Technical Design |
| * Need to confirm "Type of Conversion". * In Document structure mapping doc has to be attached. * Program Attributes has to be filled once FM is finalized. * In Technical flow diagram, loading FM details has to be updated. * In Business requirements, MDG requirements has to be updated. * In Messages, FM details has to be updated. * Unit test plan has to be updated properly. |

|  |
| --- |
| 12.Unit Test Plan |
| |  |  |  | | --- | --- | --- | | **Scenario #** | **Input Selection Criteria** | **Expected Result** | | 001 | Company code is missing in target system | Company code does not exist  (Need to manually check in CFIN) | | 002 | The source system not having correct data | The source systems have incorrect data | | 003 | Special Purpose Ledger | Check whether all fields have been loaded and populated correctly. View in S4 by using the T code (SE11) | | 004 | Validation Check | Whatever record pass the validation rule should be loaded to the S/4.  Check with negative results to make sure validation transform functioning well | |

|  |
| --- |
| 13.Transport Details |
| |  |  |  | | --- | --- | --- | | **Transport #** | **Type** | **Description** | | JOB\_NAME | Central Repository Upload/Download | The ETL job JoB\_Name will be loaded into the  central repository and will be downloaded from  there into the designated repositories in QA,  STG and PRD | |