OUM

DS.140 Design Specification

Cigna Corporation

BI-ETL-0004 ODI CES Redistribution Ratios ETL Technical Requirements

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Version: 1.0

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# Document Control

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5

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| --- | --- | --- | --- |
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# Business Overview

As part of the Building Financial Foundations project, Oracle Enterprise Business Suite (EBS) R12 was implemented / upgraded in an effort to modernize the overall accounting and financial reporting process. Reporting for the General Ledger (GL), Accounts Payable (AP), Fixed Assets (FA) and Accounts Receivable (AR) were developed in Discoverer.

To build upon the current reporting, the Expense Redesign projects plans to implement Business Intelligence (BI) to:

* Integrated systems and reporting tools to automate business processes and better insight into data resulting in time and cost savings
* Self-Service Business Intelligence to aid timely and intelligent business decisions by providing trustworthy and relevant and timely access to data
* Build a solid foundation for future reporting needs, including management reporting and analytics. Replace older reporting tools with modern and more effective integrated reporting technologies
* Provide a platform for analytical and operational reporting
* Adhoc reporting with drilldown and dashboard capabilities
* Extend the current operational reporting capabilities
* Enhance analytical, real time, metadata reporting capabilities

Business Intelligence reporting will be standardized on the Oracle Business Intelligence Enterprise Edition (OBIEE) platform. Oracle Business Intelligence Application (OBIA) will be implemented to provide GAAP, STAT, MLR reporting, extend analysis capabilities, and provide operating expense reporting to various areas in the Finance community.

CES Redistribution transactions reside in the custom area of Oracle EBS. Out of the box OBIA ETL do not bring them into OBIA data warehouse or BI. So custom extract transform, load procedures need to be designed and built to bring these data into OBIA data warehouse, to enable further BI analytical reporting on pre-allocated expenses data.

This document describes the functional requirements, source of data elements, logic and flow of the Extract, Transform and Load (ETL) process.

**CES Redistribution Ratio**

**OOTB doesn’t fetch the custom source details to the DW. As part of this change create new custom packages and pull the CES Redistribution Ratio source details to the custom fact.**

## Assumptions

* The scope of these changes is limited to incremental load only.
* Data quality issues if any will be handled by the source system (EBS).

## Risks & Issues

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Risk/Issue** | **Probability**  **(H/M/L)** | **Mitigation** |
|  |  |  |  |
|  |  |  |  |

## Referential Documents

The following document is the Functional document and requirements:

[CES](https://centralhub.cigna.com/project/epms13058/Expense%20Reporting/Design/Reporting/Functional%20Specs/ETL/BI-ETL-0005_FS_RD-140_Redistribution_Ratios_ETL.docx:/centralhub.cigna.com/project/epms13058/Expense%20Reporting/Design/Reporting/Functional%20Specs/ETL/BI-ETL-0004_CHANGES_TO_OOTB_OBIA_ETL.docx) [Redistribution](https://centralhub.cigna.com/project/epms13058/Expense%20Reporting/Design/Reporting/Functional%20Specs/ETL/BI-ETL-0005_FS_RD-140_Redistribution_Ratios_ETL.docx) Ratios

## Definitions and Acronyms

|  |  |
| --- | --- |
| **Key Word** | **Meaning** |
| OBIEE | Oracle Business Intelligence Enterprise Edition |
| OOB | Out Of The Box |
| RPD | Repository File |
| ETL | Extract, Transform and Load |
| BI | Business Intelligence |
| OBAW / DW | OBIA Data warehouse |
| EBS R12 | Oracle E-Business Suite Release 12 |
| OBIA | Oracle Business Intelligence Applications |

# Functional Requirements

* All Redistribution Ratio records with a Status = V that reside in XXC\_XLA\_CES\_REDIST\_RATIOS need to be extracted and loaded into BI data warehouse
* Incremental loads should be ran on the morning prior to the first day of each month unless an exception has occurred. The data is only updated in the source on the last day of each month.
* New transactions need to be pulled by ETL via incremental load and recorded in DW.
* Oracle standard practice for realizing archival of source system records vs deletion should be followed. Records loaded into DW should not be deleted or purged unless specific business requirement is received.
* Any failures in ETL need to be alerted via email to the support team and fixed as soon as possible. Partial load is not acceptable.
* Business user friendly and configurable value sets and lookups on the source system side need to be implemented as needed to avoid hard coding of filter criteria and conditions during extract.
* Custom ETL code should strictly follow and mimic out of the box ETL coding standards and best practices.

# Technical Overview

* CES Redistribution Ratio

**OOTB doesn’t fetch the custom source details to the DW. As part of this change create new custom packages and pull the CES Redistribution Ratio source details to the custom fact.**

|  |  |
| --- | --- |
| Folder Name | CUSTOM\_SDE\_Adaptor |
| Sub Folder | SDE\_WC\_Stage\_CESRedistributionRatioFact |
| Package Name | SDE\_WC\_Stage\_CESRedistributionRatioFact |
| Scenario Name | SDE\_WC\_STAGE\_CESREDISTRIBUTIONRATIOFACT |
| Interfaces | SDE\_CESRedisributionRatioFact.WC\_CES\_REDIST\_RATIO\_FS |
| Variables |  |

|  |  |
| --- | --- |
| Folder Name | CUSTOM\_SILOS |
| Sub Folder | SIL\_WC\_CESRedistributionRatioFact |
| Package Name | SIL\_WC\_CESRedistributionRatioFact |
| Scenario Name | SIL\_WC\_CESREDISTRIBUTIONRATIOFACT |
| Interfaces | SIL\_WC\_CESRedistributionRatioFact.WC\_CES\_REDIST\_RATIO\_F |
| Variables | GL\_Segment5\_Lov\_Id |

|  |  |
| --- | --- |
| Tool | Operator |
| Folder | Load Plan and Scenarios |
| Sub Folder | BIAPPS Load Plan -> SDE |
| Load Plan and Scenario Folder | EBS\_12\_1\_3 |
| Name | 3 SDE Fact X\_CUSTOM\_FG EBS\_12\_1\_3 |

|  |  |
| --- | --- |
| Tool | Operator |
| Folder | Load Plan and Scenarios |
| Sub Folder | BIAPPS Load Plan -> SIL |
| Load Plan and Scenario Folder | EBS\_12\_1\_3 |
| Name | 3\_SIL\_Fact\_X\_CUSTOM\_FG |

# ELT Overview

## Database Tables & Models in ODI:

Create new fact staging and fact tables in DW using WC\_CES\_REDIST\_RATIO\_FS.sql WC\_CES\_REDIST\_RATIO\_F.sql

List of tables or view created for this change as below:

|  |  |  |
| --- | --- | --- |
| Script Name | Description | Schema |
| WC\_CES\_REDIST\_RATIO\_FS | This script is used to create fact staging table for CES Redistribution Ratio transactions | <DW\_SCHEMA> |
| WC\_CES\_REDIST\_RATIO\_F | This script is used to create fact table for CES Redistribution Ratio transactions | <DW\_SCHEMA> |
| WC\_CES\_REDIST\_RATIO\_SEQ | This script is used to create sequence for unique identification of records in Fact table. | <DW\_SCHEMA> |
| XXC\_CES\_REDIST\_RATIOS\_V | This script is used to create custom view to pull the source transactions from Custom source tables. | <EBS\_SCHEMA> |

**Model Changes:**

Reverse engineer the below tables

|  |  |
| --- | --- |
| Model Folder Name | Oracle BI Applications |
| Sub Folder | Fact, Fact Staging |
| Table | WC\_CES\_REDIST\_RATIO\_F, WC\_CES\_REDIST\_RATIO\_FS |

## Data Lineage/Mapping

Please refer to the following Paths Excel document for the EBS Data Sources, Staging table Mappings for both Fact and Dimensions, and final Target table mappings:



## ODI Code Changes:

**SDE Code changes:**

**Step-1:**

In SDE\_CESRedisributionRatioFact.WC\_CES\_REDIST\_RATIO\_FS pull the transactions from XXC\_CES\_REDIST\_RATIOS\_V which is a custom view to pull the Redistribution Ratio transactions from the EBS.

**Data Mapping:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Interface** | **Source Table** | **Target table** | **Mapping** |
| SDE\_CESRedisributionRatioFact.WC\_CES\_REDIST\_RATIO\_FS | XXC\_BI\_CES\_REDIST\_RATIOS\_V(Custom View) | WC\_CES\_REDIST\_RATIO\_FS | All columns |

**Filter:**

|  |  |  |
| --- | --- | --- |
| **Interface** | **Source Table** | **Filter** |
| SDE\_CESRedisributionRatioFact.WC\_CES\_REDIST\_RATIO\_FS | XXC (XXC\_BI\_CES\_REDIST\_RATIOS\_V(Custom View)) | RUN\_FULL\_INCREMENTAL('#IS\_INCREMENTAL', XXC.CREATION\_DATE > TO\_DATE\_VAR('#INITIAL\_EXTRACT\_DATE'),  XXC.LAST\_UPDATE\_DATE >= TO\_DATE\_VAR('#LAST\_EXTRACT\_DATE') ) |

**SIL Code Changes:**

**Data Mapping:**

**Step-1:**

In SIL\_WC\_CESRedistributionRatioFact.WC\_CES\_REDIST\_RATIO\_F pull the transactions/records that reached the Fact staging table.

|  |  |  |  |
| --- | --- | --- | --- |
| **Interface** | **Source Table** | **Target table** | **Mapping** |
| SIL\_WC\_CESRedistributionRatioFact.WC\_CES\_REDIST\_RATIO\_F | WC\_CES\_REDIST\_RATIO\_FS | WC\_CES\_REDIST\_RATIO\_F | Map all the columns |

**LookUps:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Source** | **Lookup** | **Lookup Expression** | **Join Condition** |
| (WC\_CES\_REDIST\_RATIO\_FS) S | W\_GL\_SEGMENT\_D\_EXP(General Ledger Segment Dimension) | S.EXPENSE\_CENTER=W\_GL\_SEGMENT\_D\_EXP.SEGMENT\_VAL\_CODE AND W\_GL\_SEGMENT\_D\_EXP.SEGMENT\_LOV\_ID='#GL\_Segment5\_Lov\_Id' AND S.DATASOURCE\_NUM\_ID=W\_GL\_SEGMENT\_D\_EXP.DATASOURCE\_NUM\_ID | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | W\_GL\_SEGMENT\_D\_REXP(General Ledger Segment Dimension) | S.REDIST\_EXP\_CENTER=W\_GL\_SEGMENT\_D\_REXP.SEGMENT\_VAL\_CODE AND W\_GL\_SEGMENT\_D\_REXP.SEGMENT\_LOV\_ID='#GL\_Segment5\_Lov\_Id' AND S.DATASOURCE\_NUM\_ID=W\_GL\_SEGMENT\_D\_REXP.DATASOURCE\_NUM\_ID | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | W\_USER\_D\_CREATED(W\_USER\_D) | S.CREATED\_BY\_ID=W\_USER\_D\_CREATED.INTEGRATION\_ID AND  S.DATASOURCE\_NUM\_ID=W\_USER\_D\_CREATED.DATASOURCE\_NUM\_ID  AND S.CREATED\_ON\_DT>=W\_USER\_D\_CREATED.EFFECTIVE\_FROM\_DT  AND S.CREATED\_ON\_DT<W\_USER\_D\_CREATED.EFFECTIVE\_TO\_DT | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | W\_MCAL\_PERIOD\_D(Fiscal Period Dimension Table) | S.PERIOD\_NAME=W\_MCAL\_PERIOD\_D.MCAL\_PERIOD\_NAME AND S.DATASOURCE\_NUM\_ID=W\_MCAL\_PERIOD\_D.DATASOURCE\_NUM\_ID | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | W\_MCAL\_PERIOD\_D(Fiscal Period Dimension Table) | S.CHANGED\_BY\_ID=W\_USER\_D\_UPDATED.INTEGRATION\_ID AND  S.DATASOURCE\_NUM\_ID=W\_USER\_D\_UPDATED.DATASOURCE\_NUM\_ID  AND S.CREATED\_ON\_DT>=W\_USER\_D\_UPDATED.EFFECTIVE\_FROM\_DT  AND S.CREATED\_ON\_DT<W\_USER\_D\_UPDATED.EFFECTIVE\_TO\_DT | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | WC\_COSTPOOL\_D\_RCP(WC\_COSTPOOL\_D) | S.REDIST\_COSTPOOL=WC\_COSTPOOL\_D\_RCP.COSTPOOL\_CODE AND S.DATASOURCE\_NUM\_ID=WC\_COSTPOOL\_D\_RCP.DATASOURCE\_NUM\_ID | SQL left-outer join in the from clause |
| (WC\_CES\_REDIST\_RATIO\_FS) S | WC\_COSTPOOL\_D\_CP(WC\_COSTPOOL\_D) | S.COST\_POOL=WC\_COSTPOOL\_D\_CP.COSTPOOL\_CODE AND S.DATASOURCE\_NUM\_ID=WC\_COSTPOOL\_D\_CP.DATASOURCE\_NUM\_ID | SQL left-outer join in the from clause |

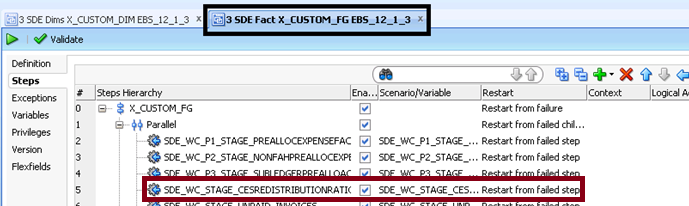
## Custom Components

Please refer the list of the custom objects used for this change (DB tables, and ODI components).

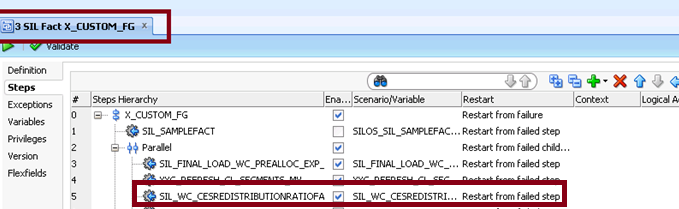


## ODI LP Changes:

3 SDE Fact X\_CUSTOM\_FG EBS\_12\_1\_3



3 SIL Fact X\_CUSTOM\_FG



# Open and Closed Issues

1. Add open issues that you identify while writing or reviewing this document to the open issues section. As you resolve issues, move them to the closed issues section and keep the issue ID the same. Include an explanation of the resolution.  
     
   When this work product is complete, any open issues should be transferred to the project- or process-level Issue Log (Manage focus area) and managed using a project level Issue Form (Manage focus area). In addition, the open items should remain in the open issues section of this work product, but flagged in the resolution column as being transferred.

## Open Issues

| **ID** | **Issue** | **Resolution** | **Responsibility** | **Target Date** | **Impact Date** |
| --- | --- | --- | --- | --- | --- |
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## Closed Issues

| **ID** | **Issue** | **Resolution** | **Responsibility** | **Target Date** | **Impact Date** |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
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