# Oracle Insurance Data Foundation Application Pack

**User Guide** 

Release 8.1.1.0.0

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### **Oracle Insurance Data Foundation Application Pack User Guide**

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# **Document Control**

Version Number	Revision Date	Change Log
1.0	February-2021	Created the OIDF Application Pack Release 8.1.1.0.0 User Guide.
		Added the following sections:
		Cargo and Inland Marine
		Special Event Insurance
2.0	June-2021	Updated the <u>PMF</u> screens.
		Added <u>Health IoT</u> .
		<ul> <li>Updated the section <u>Data Quality Framework</u>.</li> </ul>

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# 1 Preface

## **Topics:**

- What is New in this Release of OIDF Application Pack
- Audience
- Access to Oracle Support
- Related Information Sources

# 1.1 What is New in this Release of OIDF Application Pack

This section lists new features and changes in the Oracle Insurance Data Foundation (OIDF) Application Pack.

## 1.1.1 New Features

This section lists the new features described in this manual.

Table 1: New features in the OIDF Application Pack and their description

Feature Name	Feature Description
Cargo and Inland Marine	The property and goods during the shipment, transit, and storage can be liable to damage or loss. The Cargo and Inland Marine Insurance provides coverage against such liabilities.
	In OIDF parlance, the cargo is a part of the policy-covered asset Subject Area. Therefore, the Policy Covered Asset Details tables are enhanced to store the merchandise-related information.
	When cargo in transit is stored at different storage sites (warehouse), OIDF allows to hold that data separately in as the site information, which is required to be mapped to the cargo information or policy covered asset using a Policy Covered Asset Storage Map table.
Special Event Insurance	Special events are social events such as concerts, film shooting, weddings, sports, and so on that require coverage against heterogeneous liabilities such as event cancellation, artist not turning up, terrorism, and so on.
	A heterogeneity aspect of the special event is covered through multiple Policy Coverages. To complete contract information capture, the Policy Coverage Special Event Map table is added in the OIDF Data Model.
	Any Party that needs insurance coverage against the liquor liabilities can obtain insurance using the Policy Coverages. The liquor liabilities coverage may be applicable as a part of the Special Event Insurance if the liquor is served at the special event venue.

## 1.1.2 Deprecated Features

There are no deprecated features in this release.

## 1.1.3 Desupported Features

There are no desupported features in this release.

## 1.2 Audience

The Oracle Insurance Data Foundation (OIDF) Application Pack User Guide is intended for Administrators, Business User, Strategists, and Data Analyst, who are responsible for installing and maintaining the following:

- OIDF Application Pack components
- OFSAA Architecture
- UNIX Commands
- Database Concepts
- The web server or web application server

## 1.3 Access to Oracle Support

Oracle customers can access electronic support through My Oracle Support (MOS). For more information, visit <a href="http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info">http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info</a> or visit <a href="http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs">http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs</a> if you are hearing impaired.

## 1.4 Related Information Sources

Oracle strives to keep this and all other related documents updated regularly. Visit the <a href="OHC">OHC</a>
<a href="Documentation Library">Documentation Library</a> and <a href="My Oracle Support">My Oracle Support</a> web pages to download the latest document version available. The list of related documents is as follows:

- OHC Documentation Library for the OIDF Application Pack Release 8.1.x.x.x product documents:
  - Oracle Insurance Data Foundation Application Pack Installation and Configuration Guide Release 8.1.1.0.0
  - Oracle Insurance Data Foundation Application Pack Release Notes 8.1.1.0.0
- OHC Documentation Library for the OIDF Application Pack Release 8.1.x.x.x other documents:
  - Oracle Insurance Data Foundation Application Pack Data Protection Implementation Guide Release 8.1.x
  - Oracle Financial Services Analytical Applications (OFSAA) Data Model Extension Guidelines
     Document Release 8.1.x
  - Oracle Financial Services Analytical Applications (OFSAA) Data Model Naming Standards Guide Release 8.1.x
  - Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x
  - Oracle Insurance Data Foundation Application Pack Security Guide Release 8.1.x
  - Oracle Insurance Data Foundation Application Pack Cloning Reference Guide Release 8.1.x
- My Oracle Support for the OIDF Application Pack Release 8.1.x.x.x technical documents:

- Run Chart
- Changelog
- SCD Metadata
- T2T Metadata
- Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.1.0.0
- OHC Documentation Library contains the following OFS AAAI Application Pack Release 8.1.1.0.0 product documents:
  - Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0
  - Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release
     8.1.1.0.0
  - Oracle Financial Services Advanced Analytical Applications Infrastructure Environment Check Utility Guide Release 8.1.x
  - Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x
  - Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework
     Orchestration Guide Release 8.1.1.0.0
  - Oracle Financial Services Analytical Applications (OFSAA) Metadata Browser User Guide Release
     8.1.0.0.0
- OHC Documentation Library contains the following OFSAA Release 8.1.x generic documents:
  - Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x
  - Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.1.x
- Oracle Financial Services Analytical Applications (OFSAA) Licensing Information User Manual Release 8.1.1.0.0
- Oracle Financial Services Analytical Applications Data Model Utilities User Guide

For information about the purpose of each of the OIDF Application Pack documents, see the <u>About OIDF</u> <u>Documents</u> section.

#### **Introduction to OIDF** 2

This section explains about Oracle Insurance Data Foundation (OIDF), its components, its relationship with Oracle Financial Services Analytical Applications Infrastructure (OFSAAI), and the key prerequisites to run OIDF.

## **Topics:**

- Overview
- Components of OIDF
- Relationship to Oracle Financial Services Analytical Applications
- **OIDF Prerequisite Components and Tools**

#### **Overview** 2.1

Oracle Insurance Data Foundation (OIDF) is an analytical data warehouse platform for the Insurance industry. OIDF combines an industry data model for Financial Services along with a set of management and infrastructure tools that enables Financial Services institutions to develop, deploy, and operate analytical solutions covering key functional areas in Financial Services, including:

- **Enterprise Risk Management**
- **Enterprise Performance Management**
- **Customer Insight**

OIDF supports a variety of insurance business segments under Direct insurance contracts namely Life Policies, Health Policies, Annuities, Property and Casualty policies, and Retirement Policies and under indirect or reinsurance business segment it supports reinsurance held as well as reinsurance issued

OIDF is a comprehensive data management platform that helps Insurance Companies to manage the analytical data life cycle from sourcing to reporting, as a consistent platform and toolset.

## 2.2 Components of OIDF

OIDF consists of the following components, which are explained in additional detail in the next chapter:

Table 2: OIDF Components and their description

Criteria	Description
OIDF Analytical Warehouse Data Model	<ul> <li>OIDF Analytical Warehouse Data Model is a Physical Data Model that supports data sourcing and reporting related to key analytical use cases in the Insurance industry.</li> <li>The Warehouse Model is a Physical Data Model is readily deployable, and consists of database object definitions, and additional supporting scripts.</li> <li>It is organized into two distinct sets of tables based on purpose:         <ul> <li>The Staging Model: This model facilitates data sourcing from the Insurance provider's internal operational systems such as Policy or Contract systems, investments, Claims systems, Master Data Management systems, and so on.</li> <li>The Reporting Model: This model facilitates the storage of outputs from analytical tools, applications, and engines in a manner that is conducive to BI reporting.</li> <li>OIDF Analytical Warehouse Model is typically deployed into production via a set of management tools called the Oracle Financial Services Analytical Application Infrastructure (OFSAAI). The AAI application is a separate product and is a prerequisite for OIDF (see the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0).</li> </ul> </li> </ul>
Supporting Scripts	Supporting Scripts are scripts provided as part of the OIDF package for basic operations such as internal data movement between the staging and reporting areas.

# 2.3 Relationship to Oracle Financial Services Analytical Applications

The OIDF is very closely related to the Oracle Financial Services Analytical Applications (OFSAA) in the following ways:

- Data Model
  - OIDF Staging Model provides the complete data sourcing foundation for OFSAA applications.
     All use case or application-specific input data requirements are captured as part of the Staging Data Model. OIDF Staging Model is a combination of all staging models supplied with each OFSAA application.
  - OIDF Reporting Model provides a complete reporting data model common to all the OFSAA
    Business Intelligence (BI) applications. This includes a single set of conformed dimensions and
    unified fact tables used for cross-functional reporting. OIDF Reporting Model is the superset of
    all the BI-application specific reporting models.
  - Synchronized Releases: Staging Model and Reporting Model, which are part of an OIDF release, are updated to reflect prior application-specific releases. This means that the latest release of OIDF reflects all prior application releases across OFSAA from a data model perspective, with respect to Staging Model and Reporting Model.

- Infrastructure
  - The Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) is the same infrastructure that is used to deploy and manage an OIDF instance.
  - The same collection of tools (OFSAAI) is used to manage a deployed instance of OIDF.

These are the tools used to manage the data lifecycle in OIDF:

- Model Upload
- Unified Analytical Metadata (UAM)
- **Data Quality Framework**
- T2T framework
- Mart Management Framework

# **OIDF Prerequisite Components and Tools**

The key prerequisites for running the OIDF application are listed as follows:

**Table 3: Prerequisites for the OIDF Application Pack** 

Component	Provider	Purpose
Oracle Financial Services Analytical Applications Infrastructure version 8.1.1.0.0	Oracle	OFSAAI is the platform on which the OIDF application is deployed and operated. It represents the OIDF 'runtime' environment and consists of a number of tools used to manage the data lifecycle within OIDF, from sourcing to reporting*.
Oracle Database Enterprise Edition 19c	Oracle	OIDF is certified on Oracle Database releases 11gR2 and higher.
erwin Data Modeler application 2019R1 or a higher version	Computer Associates (CA)	erwin is a Data Modeler application that provides a visual environment to manage the complex enterprise data environment.

<sup>\*</sup>OFSAAI, the infrastructure platform consists of its own prerequisites and supporting documentation.

This section explains the background of OIDF, its functional architecture along with the differences from traditional warehouse architecture. OIDF product package consists of the Analytical Data Warehouse model. The individual components of the Physical Data Model are explained in detail.

## **Topics:**

- Background
- OIDF Architecture
- Differences from Traditional Warehouse Architecture
- Subject Areas Organization
- OIDF Physical Data Model

## 3.1 Background

It is important to note that OIDF architecture differs from 'traditional' data warehouse architecture.

OIDF was built to specifically address the key challenges of building a scalable, practical data management platform to support Insurance Analytics needs. The differences from traditional BI architecture are highlighted and explained in the following sections.

## 3.2 OIDF Architecture

The following figure depicts the Data Foundation Functional Architecture in OFSAA.

Results/Reporting & BI Staging/Foundation Processing/Analytics Dimensions, untransformed Messaging source attributes, SCD handling **Unified Sourcing Structure** Solution-specific Result Subjects Accounts & Instruments SOA Transactions Ledger App-specific Reference Data, data loading Hierarchies Batch Feeds (T2T) Designed for Load Performance (ELT) **Unified Results Foundation** Computed Replication Versioned Loads Additional Reporting Engine Transaction-level granularity Processing Customer Account Transaction Outputs 50 Designed for Query Data Quality Performance Full History Store Aggregate AND Transaction GL Reconciliation granularity Unified Result Structures Adjustments Conformed dimensions Versioned Results Statistical Security & Data Analytical Process Workflow Modeling Quality Definition, Execution Tools User admin

Figure 1: Data Foundation Functional Architecture diagram

The OIDF architecture can be explained as two distinct, interacting components. The dark green cylindrical portions denote the data repository and the red portion denotes the management toolkit.

- A data repository whose physical structure is given by the OIDF physical data model (here Physical Data Model = OIDF Staging + OIDF Reporting). This user guide only details the structure and organization of the data repository that is covered by the data models in the OIDF.
- A management toolkit provided by OFSAAI that is used to manage the data repository, by providing
  a collection of tools and frameworks based on a common metadata foundation. This user guide
  does not cover the details of the Analytical Application Infrastructure, as that is a separate product
  with its own documentation.

The architecture illustrates the following key concepts:

- A unified data-sourcing area for analytics: The OIDF Staging Data Model provides the basis for a
  central, unified data-sourcing layer for a variety of analytical needs. The staging layer faces the
  operational (OLTP) and front office systems of an Insurance Company. It consists of tables to
  capture key business and operational data from these systems, which is then processed by one or
  more analytical engines.
- A unified reporting or consumption layer: Analytical results can be simple to complex, quantitative, and qualitative measures of a provider's Risk, Compliance, Customer, and Fund Performance. The OIDF Reporting data model is a dimensional data model spanning these key analytical functions. It forms the foundation of OFSAA Business Intelligence applications, but can clearly be used as the result data store for any equivalent engines and processes provided by other vendors, or custombuilt solutions. By providing a single data repository for reporting needs, this layer provides a foundation for departmental and cross-departmental and cross-functional reporting.
- Additionally, the schema of the reporting area is specifically built for Insurance analytics. As an
  illustration, the reporting area has a 'Run dimension' that is shared across all BI or reporting use
  cases. Similarly, the aggregation of shared measures or reporting into a common set of output
  structures (Account Summary) allows for cross-functional reporting, which is increasingly the norm
  in Insurance institutions.
- Single point of control and operation: The Oracle Financial Services Analytical Applications
  Infrastructure is a separate Oracle product that offers a set of tools that are built on a common
  metadata foundation. These tools are used to control and manage the lifecycle of data from
  sourcing to reporting. There is a collection of frameworks to manage the following lifecycle steps of
  data within OIDF:
  - Metadata Management
  - Data Quality
  - Data Movement
  - Scheduling and runtime operations
  - Security or User management
  - Analytical Process Definition and Execution
- Processing Area: As explained earlier, the primary purpose of the OIDF is to serve as a container for analytical processing from sourcing to consumption. Such processing is usually delivered in the form of discrete units called analytical applications spanning different analytical use cases ranging from Policy to Claims to Fund Allocation.
- These applications consist of custom-built computational engines and numerical libraries and may execute processes on the data that range from simple aggregations to complex, multi-step stochastic processes such as Monte-Carlo simulation.

- Hence, analytical applications place varying demands on the data infrastructure in terms of volumes and speed and hence place different demands on data architecture. In practice, the normalized (3NF) design favored.
- Enterprise Data Warehouses often fails to be efficient or performant when it comes to analytical processing across a wide range of use cases.
- Therefore, the OIDF recognizes the need for distinct application-specific working stores, separate from the staging and reporting area.

#### **ATTENTION**

The structure of what these processing area stores are decided by the actual analytical application and engine used. The OFSAA suite of applications is organized this way, with each application managing a specific set of tables or schemas within the processing area.

The processing area tables or schemas are not part of the OIDF. This is because the OIDF is intended to be an open platform. Other analytical applications and engines can equally provision data out of OIDF by mapping their input requirements appropriately to the OIDF staging area model.

## 3.3 Differences from Traditional Warehouse Architecture

This table summarizes the differences of the OIDF from a traditional Data Warehouse architecture.

Table 4: Differences between OIDF and traditional Data Warehouse Architecture

Component	OIDF	Traditional BI Architecture
Staging Layer	Common Staging Area (CSA) where data from source systems are staged and is implemented as the database schema.	Usually, a file system-based area where file-based extracts (operational images) from source systems are staged prior to loading into a target schema.
3rd Normal Form Operational Data Store or Enterprise Data Warehouse	Does not provide a physicalized model for a 3NF store.  Operational or fine-grained reporting will be fulfilled from the reporting area.	Notification was sent to all users captured as owners and users who submitted the definition.
Data Marts or Reporting Model	Set of star schemas with conformed dimensions (Ralph Kimball approach).	Set of star schemas.

With the preceding understanding in mind, the following sections describe the data models in the OIDF in detail.

## 3.4 Subject Areas Organization

The Subject Areas are organized to support detailed level analysis related to set higher-level analytical reporting solutions.

Within the above higher-level areas, there are over 165 subject areas consisting of star schemas supporting detailed analysis. Each Subject Area typically corresponds to one or possibly more star schemas, depending on the reporting need. There are currently about 500 fact and dimension tables in the reporting area. The details of the several naming conventions used in the OIDF Data Model are explained in APPENDIX: Naming Conventions Used in OIDF Data Model. For column-level details, see the Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x, which details how to extract the data dictionary from erwin section.

**Table 5: OIDF Subject Areas Organization** 

Subject Area	Description
OIDF Legal Entity	This subject area covers the legal entity or organization's structure related tables.
OIDF Party Contacts	This subject area covers the party contact details such as party address, phone details, and email details.
OIDF Party Definition	Party here refers to any person or organization who interacts with the company. All the parties associated with an insurance company under different roles like policyholder, producer, agents, issuer, and so on are loaded together in this entity.
OIDF Party Identification	This subject area covers the identification details of an individual Party or organization. Identification means the action or process of identifying someone or something, or the fact of being identified.
OIDF Party Employment	The subject area covers the employment details of an individual Party. This data applies only to Parties who are individuals. A single Party may have multiple employment details.
OIDF Party Exam and Certificates	The subject covers the details pertaining to the party's certification and related exams to it. An Exam is formal verification or validation of information learned or known, typically used to satisfy a requirement for licenses, registrations, or other firm education proof. Certification is the formal procedure by which an accredited or authorized person or agency assesses and verifies (and attests in writing by issuing a certificate) the attributes, characteristics, quality, qualification, or status of individuals or organizations, goods or services, procedures or processes, or events or situations, in accordance with established requirements or standards.
OIDF Party Financials	This subject area covers the financial information (Balance-Sheet, Profit and Loss Statement, and Ratios) of the parties. The balance sheet is prepared as of a particular date (Balance sheet creation date).
OIDF Party Medical	This subject area covers all the medical tables related to party medical details such as party medical test details, family medical test data, and party disability details.
OIDF Producer and Producer Agreements	This subject area covers Producer and Producer Agreement tables.
OIDF Insurance Liability Contracts	This subject area covers the insurance contract tables. The contract is defined as where one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder

Subject Area	Description
OIDF Trading and Investments	This subject area covers OIDF Trading and Investments related tables.
OIDF Capital Borrowings	This subject area covers OIDF Capital Borrowings related tables. Capital Borrowings refers to borrowing done by Insurance companies using debt instruments.
OIDF Capital Instruments	This subject area covers the capital Instrument details, it refers to an issue of a capital instrument to raise funds from the market. This primarily covers equity instruments. They may or not be traded in the market.
OIDF Cargo and Inland Marine	This subject area covers the details of the policy covered cargo, its storage and shipment.
OIDF Fixed Assets	This subject area covers OIDF Fixed Assets related tables.
OIDF Financial Assumptions	This subject area covers the details of the financial assumptions. An Assumption is an estimate of an uncertain variable input into a financial model, normally for the purposes of calculating premiums or benefits. This subject area covers the tables related to Insurance Assumptions such as Fact Insurance Lapse Rate Assumptions.
OIDF Demographic Assumptions	This subject area covers the details of the demographic assumptions. For example, assumption relates to predicting a person's lifespan, given their age, gender, health conditions, and other factors.
OIDF Health Telematics	This subject area covers OIDF Health Telematics related tables such as physical activity device information, Party physical activity details, and physical activity guidelines and goals for the Party.
OIDF Market Data	This subject area covers OIDF Market Data related tables.
OIDF Payment Data	This subject area covers OIDF Payment Data related tables.
OIDF Accounting and General Ledger	This subject area covers the accounting and general ledger tables associated with the insurance company, and OIDF Insurance Transactions related tables.
OIDF Insurance Claims	This subject area covers OIDF Insurance Claims related tables.
IFRS Accounting	This subject area covers the IFRS accounting-related tables such as contractual service margin and homogenous risk group tables.
OIDF Insurance Actuarial Outputs	This subject area covers OIDF Actuarial Outputs related tables.
OIDF Special Event Insurance	This subject area covers OIDF Special Events related tables.
OIDF Solvency II	This subject area covers OIDF Solvency II related tables.
OIDF Sales and Marketing	This subject area covers OIDF Sales and Marketing related tables.
OIDF Underwriting Application	This subject area holds the applications processed in each period, for analysis over time.
OIDF Underwriting Quotes	This subject area covers the insurance quote details. Quotes are subject to change depending on the information given at the time of the quote.
OIDF Underwriting Crime Data	This subject covers the criminal conviction details if the party is involved in any criminal activity. A criminal conviction is the outcome of a criminal prosecution which concludes in a judgment that the defendant is guilty of the crime charged.

Subject Area	Description
OIDF Underwriting Driving Violation	This subject area covers the driving violation details related to the party identifier. Driving violation is any violation of vehicle laws that is committed by the driver of a vehicle, while the vehicle is moving.
OIDF Underwriting Life Style Activity	This subject area covers information about a party's lifestyle activities. This section captures details surrounding the activities a party engages in that may be considered risky by insurance companies. In the Lifestyle Activity object, the more specific experience sub-objects (for example, Aviation Experience, Racing Experience, Underwater Diving Experience, Climbing Experience, Air Sports Experience, and Foreign Travel) are optional, singly occurring and mutually exclusive.
OIDF Commission	This subject area covers tables related to OIDF Commission.
OIDF Group Insurance	This subject area covers tables related to Group Insurance.
OIDF Insurance Coverage	This subject area covers tables related to Insurance Coverage.
OIDF Insurance Fund	This subject area covers tables related to Insurance Fund.
OIDF Reinsurance Contracts	This subject area covers tables related to Reinsurance Contracts.
OIDF Dwelling Insurance	This subject area covers tables related to Dwell and Dwell Inspection.
OIDF Auto Telematics	This subject area covers tables related to IoT (internet of things) for Auto Insurance.

The following table lists the solutions supported by the Results only OIDF Subject Area.

Table 6: The solutions supported by the Results-only OIDF Subject Area

Subject Area Name	Definition
ALM	Subject Areas corresponding to Asset Liability Management (ALM).
Regulatory Capital Calculation	Subject Area pertains to the Solvency II Regulatory Framework and its reporting requirements as specified in the framework.
PFT	Supports reporting related to Profitability analysis, part of the Enterprise Performance Management solution area.
OIPI	Supports reporting requirements of Insurance Analytics.
Economic Capital	Support for Aggregated Economic Capital Reporting based on risk assessments for Market, Credit, and Operational Risk.
GL Reconciliation	Support for reporting specific to the Oracle GL reconciliation module that is part of the OFSAA product line. This allows a reporting view of the reconciliation processes and outputs.
CRM	Part of the Corporate Credit Risk Solution allows reporting on Credit Limits.
Market Risk	Support for Market Risk analytics.
IFRS 17	Supports the data requirement pertaining to the IFRS 17.

Subject Area Name	Definition
Centralized Reporting	Supports the centralized reporting for an insurance company covering insurance life cycle activities from underwriting to Claim settlement including risk management use cases as mentioned above.

# 3.5 OIDF Physical Data Model

The OIDF Physical Data Model is the primary deployed structure in the OIDF. As detailed in the architecture section, it has the following key characteristics:

- Readily Deployable: The Physical Data Model is a readily deployable physical schema. It is provided as an erwin Data Model file (for details on erwin, see <a href="https://erwin.com/products/erwin-data-modeler/">https://erwin.com/products/erwin-data-modeler/</a>) and consists of tables grouped into distinct subject areas depending on function. The tables are either used to gather source data (Staging Area) or as containers of outputs or results from analytical processing and engines for reporting purposes (Reporting Area).
- Use-case Driven: The OIDF Physical Data model is driven by a set of clearly identified analytical use cases spanning Performance, Experience, and Compliance.
- Extensible: While the OIDF Physical Data Model satisfies a very large number of analytical use cases across Insurance Contracts, Claims, Underwriting, Actuarial Assumption, Financial Assumptions, Solvency, IFRS 17 subject areas, customers can find the need to customize the model for a specific installation.

These customizations can be done in accordance with guidelines published in the <u>Using OIDF</u> section of this guide.

The OIDF Physical Data Model is divided into the following two primary areas:

- Staging Data Model
- Reporting Data Model

# **3.5.1** Staging Data Model

The Common Staging Area Model (CSA) represents the point of entry of data into the OIDF. The CSA provides a simplified, unified data sourcing area for inputs required by analytical applications and engines. It consists of over 400 tables and nearly 9000 columns organized into distinct subjects. The salient features of the CSA are as follows:

- Mapping to Analytical Use Cases: Since the primary purpose of the OIDF is to be a data repository supporting analytics, each database object in the OIDF physical data model is necessarily mapped to a corresponding analytical use case.
- These mappings are captured in the data model, in the form of additional metadata called Userdefined Properties (UDPs), and can be leveraged to reduce the scope of data gathering efforts by focusing on clearly-defined end-use cases such as Market Risk Analytics, and others.
- These mappings can readily be extracted into a Download Specification, which lists the data demands for a specific analytical use case. An example is shown as follows:

Entity Name  Attribute Name	Column Domain	Table Name	Entity Description -	Column Name	Column Description
Stg_Accounting_Headv_account_h Account Head Identifier	Code_Alphanumeric_Short_Type2	Stg_Accounting_Head	Stores this the accounting head	v_account_head_identifier	A unique identifier for a Income
Stg_Accounting_Headfic_mis_date Extraction Date	DATE	Stg_Accounting_Head	Stores this the accounting head	fic_mis_date	This column stores the date as o
Stg_Accounting_Headv_branch_cd Account Branch Code	Code_Alphanumeric_Long	Stg_Accounting_Head	Stores this the accounting head	v_branch_code	The code of the branch to which
Stg_Accounting_Headv_leg_rep_ccLegal Reporting Code	Code_Alphanumeric_Long	Stg_Accounting_Head	Stores this the accounting head	v_leg_rep_code	Stores the code of the Booking Tr
Stg_Accounting_Headv_lob_code Line Of Business Code	Code_Alphanumeric_Long	Stg_Accounting_Head	Stores this the accounting head	v_lob_code	Line of business (LOB) is a functi
Stg_Accounting_Headn_account_h Account Head Amount	Amount	Stg_Accounting_Head	Stores this the accounting head	n_account_head_amt	The amount corresponding to th
Stg_Accounting_Head_Masterv_gl General Ledger Account Co	Code_Alphanumeric_Long	Stg_Accounting_Head_Master	Stores this the accounting head	v_gl_code	This column stores the code of t
Stg_Accounting_Head_Masterfic_r Extraction Date	DATE	Stg_Accounting_Head_Master	Stores this the accounting head	fic_mis_date	This column stores the date as o
Stg_Accounting_Head_Masterv_gl Gl Account Description	Text_Medium_Description	Stg_Accounting_Head_Master	Stores this the accounting head	v_gl_account_head_description	The description of general ledge
Stg_Accounting_Head_Masterv_gl Gl Account Head Type	Code_Alphanumeric_Short_Type2	Stg_Accounting_Head_Master	Stores this the accounting head	v_gl_account_head_type	Identifies the GL head type
Stg_Account_Cash_Flowsv_accour Account Or Contract Numb	Code_Alphanumeric_Long_Type3	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_account_number	This column stores the unique id
Stg_Account_Cash_Flowsfic_mis_ Extraction Date	DATE	Stg_Account_Cash_Flows	This entity stores cash flow deta	fic_mis_date	This column stores the date as o
Stg_Account_Cash_Flowsn_cash_f Cash Flow Sequence	Number_Short	Stg_Account_Cash_Flows	This entity stores cash flow deta	n_cash_flow_sequence	Numeric value indicating the loc
Stg_Account_Cash_Flowsn_scenar Scenario Number	Number_Short	Stg_Account_Cash_Flows	This entity stores cash flow deta	n_scenario_no	Scenario Number
Stg_Account_Cash_Flowsd_cash_f Cash Flow Date	DATE	Stg_Account_Cash_Flows	This entity stores cash flow deta	d_cash_flow_date	Indicates the date of the cash flo
Stg_Account_Cash_Flowsv_data_d Data Origin	Code_Alphanumeric_Long	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_data_origin	Indicates the source of the cash
Stg_Account_Cash_Flowsv_cash_f Cash Flow Type Code	Code_Alphanumeric_Long	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_cash_flow_type	Indicates if the cash flow is Prin
Stg_Account_Cash_Flowsn_cash_f Cash Flow Amount	Amount	Stg_Account_Cash_Flows	This entity stores cash flow deta	n_cash_flow_amount	Cash Flow Amount
Stg_Account_Cash_Flowsv_financ Financial Element Code	Code_Alphanumeric_Long	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_financial_element_code	Financial Element Code
Stg_Account_Cash_Flowsv_ccy_co Currency Code	Code_Currency	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_ccy_code	Unique identifier of the currency
Stg_Account_Cash_Flowsv_org_ur Organisation Unit Code	Code_Alphanumeric_Long_Type2	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_org_unit_code	This column stores the cost cent
Stg_Account_Cash_Flowsv_prod_c Product Code	Code_Alphanumeric_Long	Stg_Account_Cash_Flows	This entity stores cash flow deta	v_prod_code	This column stores the unique co
Stg_Account_Cash_Flowsn_acct_d Identity Code	Number	Stg_Account_Cash_Flows	This entity stores cash flow deta	n_acct_data_identity_cd	Identity Code

Figure 2: Download Specifications sample

- The Mappings can be generated from the OIDF erwin file using erwin's reporting tools.
- Schema Design: The data model of the Common Staging Area is designed to facilitate loading efficiency. This means that it is denormalized.
- The primary focus of the staging area is to efficiently deliver data from operational systems such as Policy Administration, Claims Processing, and Fund Management to multiple analytical applications that process this data.
- Typically, this data is extracted from source systems and loaded into OIDF directly, or alternatively
  into a pre-defined file-based operational image area from which it is subsequently loaded into the
  OIDF schema. In a large Insurance institution, it is not unusual to have 10s to 100s of millions of
  policies, and claims.
- Standard ETL (Extract, Transform, Load) approaches can fail to address this requirement
  adequately because of the complexity imposed by the target schema. If the target schema is
  increasingly normalized, then the ETL into this schema is correspondingly more complex, requiring
  careful load ordering to prevent integrity-related load failures, as well as integrity validation prior to
  loading. Such complex ETL processing is time-consuming and is prone to failure.
- To address this, the CSA is designed to support a simplified loading process. De-normalized tables
  allow efficient data loading, and subsequent transformations can be done to verify data integrity
  through a series of data quality checks. This represents an 'ELT (Extract Load Transform)' approach
  to data sourcing, which is far more suited for an analytical data repository.
- Application-managed Referential Integrity (RI): In conjunction with the database design of the staging schema, a key feature is the management of Referential Integrity primarily in the application tier, rather than within the database. Rather than imposing foreign key relationships in the database, which could cause complex loading order dependencies, relationships between staging tables are managed by the Data Quality (DQ) framework, a toolkit within the Analytical Application Infrastructure that captures the relevant data quality checks for a specific table in the staging model. These checks include:
  - Value checks (Nulls, Value ranges, business checks on numeric fields)
  - Referential Integrity checks (which are otherwise implemented as foreign key constraints)

### ATTENTION

This is also why the ER model of the staging area in erwin does not contain any relationships – the staging area is a physical data model, which is deployed using the Analytical Application Infrastructure, which manages it.

In summary – the design of the staging area data model is to allow efficient data loading for analytics. It thus has crucial differences from a general-purpose repository of operational or transactional data across an Insurance institution.

## 3.5.1.1 Details of the Staging Data Model

The CSA model consists of over 400 tables and nearly 9000 attributes. These tables are organized into multiple 'subjects', currently by analytical use case or solution need. However, it makes sense to first understand the staging area tables in terms of content before understanding how they map to analytical use cases.

There are two broad categories of staging data, regardless of the use case or the analytical application that requires it:

- Business Data: This set of tables captures the actual business events and the resulting state of an
  Insurance Company from those business events. The OLTP systems (or Transactional Systems)
  capture this information resulting from the execution of the provider's different business processes.
  Broadly, this information can be categorized as:
  - Events: Business transactions, whether financial or non-financial, represent business happenings (events) that are relevant for analytical purposes. For example, a financial transaction by a customer on a current account is a specific event.
  - Events happen at a specific point in time and are recorded by OLTP systems. In the staging area
    model, there are several transaction tables that capture this detail for both financial and nonfinancial transactions.
  - State: The net effect of business transactions is to change the provider's overall financial or non-financial state. This state information is typically captured by product-specific systems in an Insurance Institution.
- Reference or Master Data: Events and states refer to 'business activities' of an Insurance institution. To provide more detail on these, the Insurance institution needs to capture additional data that provides context for these activities. This data can be called 'reference data' or 'master data', and covers several business dimensions of a given transaction or account. For example an Insurance institution has a master list of products that it sells to customers (Product Master). Similarly, it has a list of customers (Customer master). These and other lists provide context for each business transaction or account. Insurance institutions typically maintain 'Master' data for this purpose.
- With this background, the following lists the key categories of business data and reference data in the staging data model.

## 3.5.2 Reporting Data Model

The Reporting Data Model is the point where outputs of analytical processing are aggregated for reporting and Business Intelligence (BI) tools. Similar to the Common Staging Area is the foundation for data provisioning to analytical applications, engines, and processes, the Reporting Data Model is the common data store for the outputs of these processes.

Outputs are computed quantitative measures and Key Performance Indicators that involve simple to complex, mathematical, and statistical processing using the raw data, which is performed by specialized engines and computational models. In the OIDF design, the Reporting Data Model design ensures that the historical data is maintained.

The key features of the design of the Reporting Area model are as follows:

- Design: The Reporting Area data model is a dimensional data model. This means that it consists
  primarily of central fact tables (de-normalized), related to multiple dimension tables, also called a
  Star Schema. Additionally, the dimension tables are shared across the star schemas in the reporting
  mode, meaning they are Conformed Dimensions. This means that Drill-across reporting is naturally
  supported by the OIDF design.
- Additionally, in keeping with the key principle of the OIDF, the Reporting Model is organized by use cases to facilitate reporting and BI in a wide variety of areas.
- Support for multiple scenarios of analysis: As a result of the 2008 crisis, the Financial Services
  industry is moving towards scenario-based, forward-looking risk analysis instead of retroactive
  analysis. The reporting data model has been designed to support scenario analysis of the sort
  required by financial institutions that need to measure and report risk and performance under a
  variety of economic scenarios.
- To facilitate this, the Oracle Financial Services Advanced Analytical Infrastructure (OFSAAI) provides
  a Stress Testing framework, allowing risk analysis to be performed under a variety of known
  scenarios corresponding to different input parameter values to risk models.
- The reporting model provides support for this kind of analysis via a Run Dimension it allows analytical engines to load multiple result sets identified by scenarios, and hence permits reporting related to baseline and stress conditions in economic terms.
- Support for Cross-Functional Reporting: The third critical feature of the Reporting area design is the support for cross-functional reporting.
- Typically, Business Intelligence and Reporting Solutions work off a dedicated, purpose-specific data store called a data mart. Data marts are function-specific data stores typically star schemas (for example Marketing Data Marts, Risk Data Marts, Customer Data Mart), that provide the necessary reporting and analytics relevant to a particular business function in the Insurance Institution.
- The trend is for cross-functional analytics and reporting. The majority of emerging needs relate to the analytical problems at the intersection of the distinct areas of Risk, Performance, Customer Insight, and Compliance.

# 4 Using OIDF

This section details how the OIDF models are delivered and how they can be installed and configured into the required environment. The first two sections give you an understanding of the Delivery Mechanism and OIDF Installation. The <a href="Data Dictionary">Data Dictionary</a> and <a href="Download Specifications">Download Specifications</a> sections explain how the self-documenting erwin file includes the data dictionary and Download Specifications within erwin itself.

In addition, the Extending Data Model section has guidelines for customization and designing the Staging and Results Area of Physical Data Model.

### **Topics:**

- Delivery Mechanism
- Installing OIDF
- OIDF Supporting Documentation
- Extending the OIDF Physical Data Model

# 4.1 Delivery Mechanism

OIDF being a collection of data model artifacts includes a readily deployable model (the OIDF Physical Data Model). The data model (Physical) is delivered as erwin files. The OIDF hence requires a license of the erwin Data Modeler application.

erwin is the current and only supported modeling tool to view and edit the model. Currently, the minimum version of Erwin Data Modeler application supported is 2019R1 or a higher version.

**NOTE** 

OFS AAI supports data model upload for data models generated using erwin. For information on compatible versions, see the corresponding release of the <u>Oracle Financial Services Analytical Applications (OFSAA)</u> <u>Technology Matrix</u>.

# **4.2** Installing OIDF

As detailed earlier, OIDF requires the Oracle Financial Services Analytical Application Infrastructure release to deploy and operate.

See the <u>Oracle Insurance Data Foundation Application Pack Installation and Configuration Guide Release</u> 8.1.1.0.0 for step-wise instructions on how to configure and install OIDF on an OFSAAI instance.

# 4.3 OIDF Supporting Documentation

The preceding sections have provided an overview of the organization of the OIDF and its several component data models. Appendix A, page A-1 explains the naming conventions used in the OIDF data model.

The OIDF is a detailed model, with nearly 850 entities across both the Staging and Results Area in the physical data model.

Since it is delivered as an erwin file, all the detailed metadata for the model (Table, Column, Entity, Attribute, Relationship) definitions are embedded in the file itself. The advantage of this approach is that any site-specific customizations to OIDF can be performed within erwin, and the updated documentation is retained in the file in the form of additional metadata.

The two key detailed artifacts of OIDF documentation that can be extracted from within the erwin Data Model are as follows:

- <u>Data Dictionary</u>
- Download Specifications

For more information on Dimension Management and AMHM, see the *Dimension Management* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u> and *Dimension Load Procedure* section in <u>Oracle Financial Services Analytical Applications Data Model Utilities User Guide</u>.

## 4.3.1 Data Dictionary

The data dictionary for OIDF can be extracted from the erwin file using erwin's reporting capability, using a pre-built set of templates for data extraction.

Instructions for how to do so are provided in a separate accompanying document that provides step-by-step instructions. See the <u>Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x</u>, which details how to extract the data dictionary from the erwin section.

# 4.3.2 Download Specifications

As detailed in the staging area section, the mapping from the Staging Data Model to use cases, called the Download Specification (My Oracle Support) provides an efficient way to manage the sourcing of data into the OIDF staging area. This is done by mapping the staging model at a column level to use cases. This mapping information is embedded in erwin at a column level using metadata called User Defined Properties (UDPs).

The Download Specifications can be extracted using pre-built templates, in a manner similar to the Data Dictionary. Instructions for how to do so are also provided in the <u>Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x</u>, which details how to extract the data dictionary from the erwin section.

# 4.4 Extending the OIDF Physical Data Model

Oracle Insurance Data Foundation (OIDF) Physical Data Model (PDM) design evolves as the analytical use cases covered by the OIDF and enhanced as improvements are engineered as a part of the product lifecycle. While the model satisfies a very large number of analytical use cases across Risk, Finance, Marketing, and Compliance subject areas, customers may need to customize the model for a specific installation. These custom changes however may impact the ability of the OIDF installation to be upgraded to later versions of the product. The guidelines outlined in this section will help minimize the impact of custom changes to the model when the installation needs to be upgraded to a later version of OIDF.

### **Topics:**

- <u>Customization Process Guidelines</u>
- Staging Area Design Guidelines

- Results Area Design Guidelines
- Upgrading Data Model

## 4.4.1 Customization Process Guidelines

It is strongly recommended to consult the OFSAA Support or Field Engineers or Consulting Staff before making any changes to the PDM for the following reasons:

Tables in the PDM common Staging Area are designed to meet the complex needs of data sourcing
for many different financial services analytical use cases and as such have a large number of
columns, and the need for the modification should be reviewed with OFSAA consultants.

The Results Area star schemas have been designed with a set of common fact tables and dimension tables to support the integration of results from multiple analytical applications and any customization should be reviewed in order to ensure that the unified reporting capabilities of the model are preserved.

After a review with OFSAA field consultants, an extension to the model should first be logged as a request for product enhancement via the standard support process. This allows:

- Product support and product management teams to identify if a similar enhancement request was submitted on behalf of another customer so that a uniform Model Enhancement design recommendation can be provided to all customers.
- OIDF product management to evaluate if the enhancement request is applicable more broadly to
  other customers and if the change should in fact is to be taken as a design requirement for
  subsequent releases.

**NOTE** 

OFS AAI supports data model upload for data models generated using erwin Data Modeler application 2019R1 or a higher version.

# 4.4.2 Staging Area Design Guidelines

The following guidelines apply to the Staging Area Design:

- Ensure that the naming conventions as detailed in Appendix A, page A-1 section are followed.
- Entity relationships and constraints are enforced through the OFSAAI data management toolkit and are not enforced via database referential integrity checks.
- The model should not be changed to enforce referential integrity checks and other data quality checks via database definitions.
- All Staging Area tables must have a column that identifies the system from where data is sourced (source system ID).
- The code columns in master data tables and tables that contain dimension data should be designed to hold alphanumeric values.
- The Domain dictionary maintains the list of attribute domains. New columns must be identified with an existing domain instead of explicitly defining column data type and valid values. See guidelines in Appendix A, page A-1 section on the use of defined Domains.

- Tables (for example, reference or lookup tables with static data) required only for a specific application or use case should be a part of the application-specific processing area and should not be part of the common Staging Area in OIDF.
- OIDF download specifications identify the tables and columns for which data needs to be sourced
  for a specific analytical use case. Any new tables and (or) columns should have its "APPLICATION
  USAGE" UDP set with the appropriate application value so that the generated download
  specification includes the customized column and table. The master list of UDP's is maintained as a
  central dictionary in erwin.
- All columns added or modified as a part of the customization should be marked as such:
  - The column level UDP named "CUSTOM" must be marked YES, identifying the column as a custom property.
  - The "Customization Reason" UDP should be specified. Valid values are provided as a drop-down list and can be "Pending Enhancement Request" or "Specific to Customer".

The "Type of Change" UDP should be set to the appropriate type of change as provided in the drop-down list (Length, Datatype, Logical Name, Description, and Addition).

# 4.4.3 Results Area Design Guidelines

The Results Area consists of a set of star schemas with conformed dimensions and common fact tables. The integration of results from multiple application use cases is achieved by having common fact tables for customer and account level measures. The design of the results area allows for drill-down and drill-across BI reporting, which should be preserved after customization.

Following are the Results Area Design Guidelines:

- Ensure that the naming convention for results tables and columns detailed in Appendix A, page A-1 section is followed.
- Dimensional conformance should be maintained: The same dimensional information should not be represented in different forms. In addition, dimension table design should be compatible with the slowly changing dimension process design and so should have the required columns.
- The common accounts summary fact table (FCT\_COMMON\_POLICY\_SUMMARY) consolidates
  measures at an account level granularity for all applications. Account-level attributes captured from
  source systems in staging and those attributes that do not vary between runs should be part of the
  common accounts summary table. This enables the integrated reporting of account information.

#### NOTE

Any account-level application-specific attributes and measures that are computed by applications should be part of the application-specific account summary entities.

The common customer summary fact table (FCT\_COMMON\_CUSTOMER\_SUMMARY) consolidates
measures at a customer level granularity for all applications. Customer level attributes captured
from source systems in staging and those attributes that do not vary between runs should be part
of the common customer summary table. This enables the integrated reporting of customer
information.

#### **NOTE**

Any customer level application-specific attributes and measures that are computed by applications should be part of the application-specific customer summary entities.

- Aggregate Entities: Depending on performance requirements for each application, information can be reported out of aggregate entities. However, a drill through to the base entity from the aggregate entity is mandatory.
- Reporting and local currency support: Include additional attributes in the fact tables to store reporting and local currency equivalent of base measures. These attributes need to be computed by looking into the exchange rates.
- Support for full history: Any new tables in the Results area should be designed to support the maintenance of full history.

#### **Upgrading Data Model** 4.4.4

The model upgrade process is achieved through the erwin Model Compare and Merge utility. See the erwin documentation Oracle Financial Services Analytical Applications (OFSAA) Data Model Extension Guidelines Document Release 8.1.x for more information about the Menu options, the process of comparing, and merging models.

For information about upgrading the OIDF Application Pack from the 8.0.x versions to 8.1.1.0.0 for an incremental data model, see the Oracle Insurance Data Foundation Application Pack Upgrade Guide Release 8.1.0.0.0.

#### **Application of Data Domain Browser in OIDF** 5

This section provides information about Data Domain Browser usage in the Oracle Insurance Data Foundation application.

### **Topics:**

- Required Software Licenses to Use Data Domain Browser
- Introduction to Data Domain Browser
- Map the Data Domain Visualizer Role to the ETL Analyst (ETLADM) User
- **Data Domain Browser Subject Areas**
- **Segments**
- Tags

#### **Required Software Licenses to Use Data Domain Browser** 5.1

The software licenses that must be installed to access and use Data Domain Browser for OIDF application are:

- Oracle Financial Services Data Integration (OFS DI) Application Pack v8.1.1.0.0 Minor Release. To find the installer patch ID, see the *Preparing for Installation* section in the Oracle Financial Services Data Integration (OFS DI) Application Pack 8.1.1.0.0 Installation Guide.
- Oracle Insurance Data Foundation Application Pack v8.1.1.0.0 Minor Release installer patch ID **32347735** is available at the My Oracle Support (MOS).

#### **Introduction to Data Domain Browser 5.2**

Data Domain Browser provides Data Foundation customers a User Interface to view and query the erwin Data Model over the physical data model reports that Data Foundation provides currently. In addition, Data Domain Browser also provides all the information like physical formats along with granularity and technical details such as data type. One can view the Data Domain Browser as a logical representation of the Data Foundation. This equips User Interface with the following factors to provide a pre-built grouping of entities and data elements to enhance search by the end-user:

- To help with how to search the data model.
- To understand the entity-relationship.
- To guery the data model.

The features of Data Domain Browser are to help the user:

- To view the list of entities available in the Data Foundation in a pre-grouped format.
- To filter a particular entity or a set of entities using specific filter criteria.
- To view the data elements and their properties within a chosen entity.
- To search within the data elements using specific search criteria.

NOTE

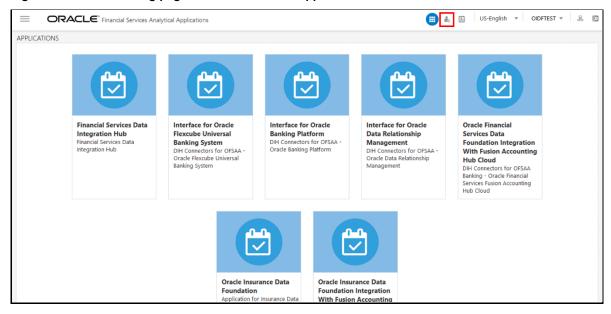
For complete information about Data Domain Browser and its User Interface, see the Data Domain Browser section in the OFS Data Integration Hub (DIH) User Guide Release 8.1.1.0.0.

### Map the Data Domain Visualizer Role to the ETL Analyst 5.3 (ETLADM) User

This section provides information about the Data Domain Visualizer access to the ETL Analyst user (with ETLADM Role Code). To map the Data Domain Visualizer access role to the ETL Analyst, follow these steps:

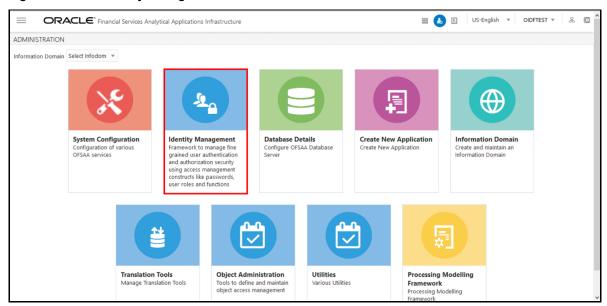
- 1. Log in to the OFSAA application as the System Administrator.
- **2.** From **OFSAA Home**, click the administration icon.

Figure 3: OFSAAI landing page with OIDF and DIH applications



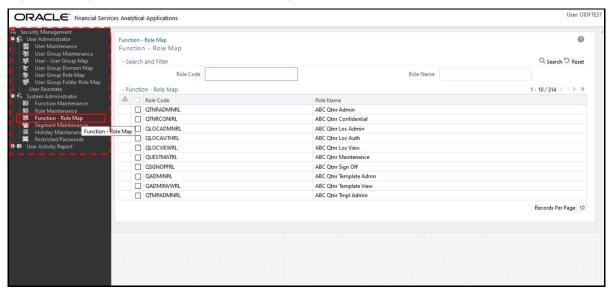
3. On the ADMINISTRATION page, select the **Identity Management** tile.

Figure 4: Select Identity Management



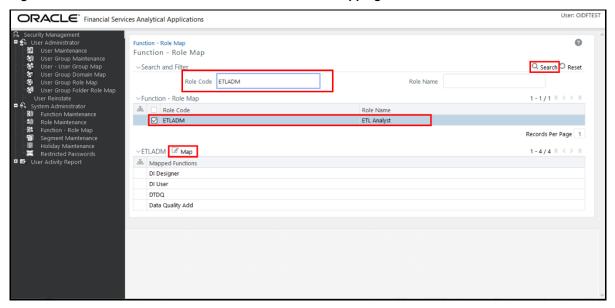
4. The Security Management menu is displayed on the LHS. Expand the System Administrator role and select Function - Role Map to open the Function - Role Map page.

Figure 5: Navigate to the Function - Role Map page



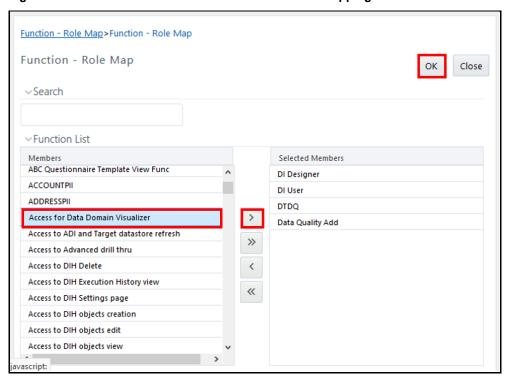
5. On the Function – Role Map page, in the Role Code field, search ETLADM, which is the Role Code for the ETL Analyst user. The ETLADM Role Code details are listed. Select ETLADM. The ETLADM mapped function details are displayed. Click the **Map** icon

Figure 6: Search the ETLADM Role Code and select edit mapping



6. The Function – Role Map page opens. Search and select the Access for Data Domain Visualizer value in the Members list and move it to the Selected Members list. To confirm the selected mapping and save changes, click **OK**.

Figure 7: Select Access for Data Domain Visualizer for mapping



- **7.** The following acknowledgment message is displayed when the mapping is successful: *Function Role Map Saved Successfully*. Click **OK**.
- **8.** On the **Function Role Map** page, in the ETLADM mapped functions details, the newly mapped function **Access for Data Domain Visualizer** is listed.

# 5.4 Data Domain Browser Subject Areas

In reference to the data model Excel report, the Subject Area defines the information related to which Data Connector must be mapped to which source system or Product. To achieve this, populate the ADIs (Application Data Interface). Application Data Interface enables us to view the logical definition of OFSAA physical entities of Staging and Result Areas. For more information, see the latest version of OFS Data Integration Hub (DIH) User Guide Release 8.1.1.0.0 that is compatible with this release of the OIDF Application Pack.

Out of all OIDF Subject Areas, only following are scoped in this release and this feature for the remaining Subject Areas is on the roadmap:

Party Subject Area

Party refers to any person or organization that interacts with the Insurance Company, and Party attributes refer to the information elements associated with any person or organization that interacts with the Insurance Company. A Party can be a customer, issuer, guarantor, and so on.

Party Subject Area consists of tables related to Party Definition, Party Contact Details, Party Identification Document, Party Medical Subject Area, Party Financial Data or Employment Attributes, Party Producer Exam, Certification, and License; Party Results, and other Party attributes such as Party type, relationship type between two Parties, Relation Role type, and Reinsurer type.

Product Subject Area

Product tables are used to store product details that the customer has opted for.

The Product Subject Area consists of the tables related to Product, Product Details, Product Type, and Product Feature.

Insurance Underwriting Subject Area

Insurance Underwriting describes the process of assessing risk, ensuring that the cost of the cover is proportionate to the risks faced by the Party or the organization concerned. It evaluates risk and exposures of potential Party or organizations. Insurance Company decides the coverage that the Party or organization must receive, and the premium associated with the coverage or whether to accept the risk and insure them.

When an applicant applies for insurance, the Insurance Company must look at different criteria to decide if they are going to accept the application for coverage. As a result, the Insurance Company creates and documents detailed information about the applicant and this process is called Underwriting Application.

Insurance Underwriting Subject Area consists of an Underwriting Application that contains details about product class, application type, application group, application status, rejection reason, underwriting issue, application party role map, and so on. Insurance Underwriting Subject Area also consists of Insurance Quotes, quote source, source method, submission method, declination type, and reports; and for risk analysis consists of details related to risk type, risk sub-type, and underwriting product class details based on the risk factors such as criminal conviction details, crime type, driving violation of vehicle laws, and lifestyle activity details of the insurer.

Producer and Producer Agreement consists of insurance distribution level type, insurance distribution payment form, insurance license provision type, insurance solicitor type, producer appointment details, producer line of authority details, producer attrition event, producer attrition event reason, producer vested type, insurance subchannel, underwriting privilege type, producer appointment details, producer insurance distribution details, and producer line of authority details tables.

#### Insurance Contracts Subject Area

Insurance Contract is a contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

Insurance Contracts Subject Area consists of Contracts, Coverages, Insurance Participation, Group Insurance, Policy Schedules, Loans, Funds, Policy Conversions, and Reinsurance Contracts.

Contract attributes cover contract identifier, product identifier, the sum insured, origination date, purchase date, maturity date, policy status, and so on. The Contracts tables consist of details about different categories of contracts such as Annuity, Health Insurance, Life Insurance, Property and Casualty, Retirement, Reinsurance Contracts Held, and Reinsurance Contracts Issued.

The Coverage tables consist of details about Policy Coverage, Age Amount Product, and Embedded Options. In the case of group insurance, policy coverages refer to the single aggregated benefit or rider bundled as a part of the product across all group members.

The Reinsurance Contracts tables store details related to insurance reserve function, consequences of losses, tax reimbursement calculation method, basis of calculating the standard GAAP reserve, Reinsurance Contract type, insurance sub-standard policy reserve method, Reinsurance accounting basis, reserves calculation method, insurance sub-standard reserve calculation basis, basis of the contract limits and retentions applicable to the claim, reserve valuation type, level of retention on the coverage, Reinsurance business origin code, the list of all policies, a reinsurance contract held by the entity, a reinsurance contract issued by the entity, mapping between Placed Collateral and Reinsurance Contract, and mapping between Mitigant and Reinsurance Contract.

Telematics is a generic term used to refer to an interdisciplinary field in Information Technology that combines telecommunications and informatics. A device is designed using Telematics that can telecommunicate computerized information. The Telematics tables consist of details related to Telematics Device, Telematics Device Type, Telematics Device Status, Telematics Event, Telematics Software, Vehicle Device Event Type, Ignition Status, On Board Diagnostic Parameter, Road Terrain Type, Road Terrain Sub Type, Tachograph Card Status, Tachograph Driver Card, Trip, Vehicle Class Type, Vehicle Class Sub Type, Vehicle On Board Diagnostic, Vehicle Filter Status, Vehicle Horizontal Coordinate Reference, Vehicle Service Status, Performance Threshold Type, Tachograph Event Type, Data Stream Type, Driving Style Class, Driving Style Parameters, Device Software Type, Service Reason, Telematics Device Details, Vehicle Device Event Details, Vehicle Fleet Map, Vehicle Services Details, Vehicle Tachograph Data, Vehicle Accelerometer Data, Vehicle Location Data, Trip Details, Trip Summary, Driver Behavior Summary, and Vehicle Performance Summary.

Dwelling inspection valuation is carried out at the time of new house purchase, renovations to the house, new policy purchase, and claims settlement. Dwelling inspection valuation helps in identifying the potential risks that can cause safety issues or losses so that they can be addressed to avoid claims. The home inspector may identify different areas where the insured is eligible for discounts on the home insurance policy making sure that the insured dwelling value is not too high or too low so that the insured saves money.

#### Actuarial Subject Area

Actuarial Subject Area consists of Actuarial Assumptions and Actuarial Outputs.

An Actuarial Assumption is an estimate of an uncertain variable input into a financial model, normally for the purposes of calculating premiums or benefits. Actuarial Assumptions consists of details related to the set of Actuarial Assumptions used for valuations, and Premium Rates. Two types of Actuarial Assumptions tables are Financial Assumptions tables and Demographic Assumptions tables.

Financial Assumptions consists of assumptions related to interest rates, lapse rate assumptions, benchmark details for Cost of Living Adjustments, and Premium Rate.

Demographic assumptions consist of assumptions related to mortality, disability, termination of employment, and retirement.

Insurance Actuarial Cashflow consist of the Actuarial Assumed Policy Summary table, and Actuarial Cash Flows, Calculations, and Result Areas Summary tables.

### Accounting and General Ledger Subject Areas

#### Accounting Subject Area

Insurance Policy Transactions are about accounting transactions done for a given policy. They are sourced from respective accounting systems in the Insurance Company.

Accounting Subject Area consists of Policy Transactions and Policy Commission.

### General Ledger Subject Area

A General Ledger is the foundation of a financial system, which is used to store and organize financial data. General Ledgers are used to create the financial statements of a company. A General Ledger account is an account or record used to sort, store, and summarize the transactions of a company. Transactions are posted to individual sub-ledger accounts as defined by the chart of accounts of that company. A Legal Entity in the Insurance institution can maintain the same General Ledger data (either solo or consolidated) in one or more source systems.

General Ledger Subject Area consists of GL Data, GL to Management Reporting, and mappers for GL to Management Reporting Result table.

#### Assets Subject Area

An insured asset is one for which an insurance company compensates the policyholder if the asset is damaged or destroyed.

#### Fixed Assets

A fixed asset is a long-term tangible piece of property or equipment that a firm owns and uses in its operations to generate income. Fixed Assets consist of the Fixed Assets Details table.

#### Policy Assets

Policy Assets consists of the Policy Covered Asset, Policy Asset Type, Policy Asset Sub Type, and Policy Asset Valuation Type tables.

#### Insurance Claims Subject Area

An insurance claim is a formal request to an Insurance Company for coverage or compensation for a covered loss or policy event. The Insurance Company validates the claim and, after approval, issues payment to the insured or to an approved interested Party on behalf of the insured.

DATA DOMAIN BROWSER SUBJECT AREAS

Insurance Claims consist of tables in the categories of estimation, processing, investigation, occurrence, and others.

### Trading and Investments Subject Area

Trading and Investments consist of the instruments, investments, mutual funds, fund cis composition, instrument rating details, and instrument market price tables.

### Organization Structure

Organization Structure consists of the Legal Entity Group and Legal Entity Details tables.

#### IFRS

International Financial Reporting Standards (IFRS) is a set accounting standard issued by the International Accounting Standards Board (IASB) so that financial statements can be consistent, transparent and comparable around the world. The IFRS accounting standards specify how companies must maintain and report their accounts, defines the types of transactions and other events with financial impact.

### IFRS Accounting

IFRS Accounting consists of tables related to IFRS Account Summary, IFRS Mitigants Summary, IFRS17 Contract Output, and IFRS17 Group Output.

#### Capital Reporting

The Capital Reporting discloses how investors view a business through a collection of analytics and insights that evaluate the capital efficiency of the business. The types of Capital Reporting are as follows:

- Capital and Own Funds: This consists of tables related to Own Fund Details, Own Fund Balances, Financial Element, Fund Capital Details, and Reserves.
- Capital Instruments: This consists of tables related to Capital Instrument Positions, Capital Instrument Proposed Issues, Capital Instrument Proposed Redeem, Capital Instrument Transactions, and Property Capital Instrument Comments.

## Risk Management

Risk Management is the process of identifying, assessing, and controlling risks to the capital and earnings of an organization. These risks can arise from a variety of sources, including financial uncertainty, legal liabilities, strategic management errors, accidents, or natural disasters. Risk Management consists of the main table Insurance Risk Type Information. The types of Risk Management are as follows:

- Market Risk: This consists of tables related to Insurance Risk Type Information, Market Investment Performance, Market Loss Simulation Bucket, and Risk Factor Outputs.
- Credit Risk: This consists of tables related to Credit Loss Simulation Bucket, Counterparty Credit Exposure, Insurance Risk Type Information, and Credit Loss.
- Insurance Risk: This consists of tables related to Insurance Risk Summary, Insurance Risk
  Details, Insurance Risk Type Information, Insurance Measure Projection, and Insurance Internal
  Model Risk Details.

#### Capital Computation

Capital Computation is the calculation of the mix of assets or resources of an Insurance Company from which it can finance its business.

Performance Analysis

Performance Analysis refers to a variety of methods used to quantify the performance of an Insurance Company over a given period. The correct Key Performance Indicators (KPI), which are metrics, are used to carry out a performance analysis and can be used to measure the performance of a particular area of an Insurance Company business.

Party and Policy Profitability Analysis

Party and Policy Profitability Analysis is the examination of factors that let the Insurance Company measure the future financial outcome of an insurance policy and the Party. As a result, the Insurance Company can determine the profitability in continuing to deal in a certain type of policy.

Cargo and Inland Marine Subject Area

Cargo and Inland Marine Insurance refers to the details of the policy covered cargo, its storage and shipment. This Subject Area consists of tables related to the vehicle, transportation, and policy covered asset storage such as vehicle class, vehicle performance threshold, vehicle details, shipment mode, transportation, policy asset covered shipment details, insurance storage, and policy asset covered storage details and map.

Special Event Insurance Subject Area

Special Event refers to a social event such as sports, film shooting, concerts, and so on are considered as a special event. This Subject Area consists of the tables related to the special event information, policy covered type for a special event against liabilities, and a map table consisting of the relationship between the policy covered and the special event.

# 5.5 Segments

A segment is a Business Segment, which refers to the group of products distinctly separated from remaining businesses based on product attributes, customers, geography, or market places.

If the Subject Area represents vertical depth, Business Segment represents the horizontal extent of functional features. As a user, when you search for a particular functionality or feature, you must look at the Subject Area. In addition, when you search for commonality across different Business Units or Departments, you must look at the Business Segment.

Business Segment groups the entities across Subject Areas. For example, whereas Underwriting, Insurance Contracts, Claims, Accounting, and so on are the Subject Areas; and Life Insurance, Annuity, and so on are the Business Segments.

The Business Segments added until the current release are as follows:

- Annuity Contracts
- Health Insurance Contracts
- Life Insurance Contracts
- Property and Casualty Insurance Contracts
- Retirement Contracts
- Reinsurance Contracts Held
- Reinsurance Contracts Issued

# **5.6** Tags

OIDF packages Subject Areas and Tags into the data model Excel report.

Tags refer to the label attached to the data element for the purpose of identifying similar data elements across entities. Therefore, tags are grouped together.

## **5.6.1** How Tags Help the User?

This section explains how the Tags in Data Domain Browser help the user in exploring the data model.

The Insurance Contracts components consist of Annuity Contracts, Health Insurance Contracts, Life Insurance Contracts, Property and Casualty Insurance Contracts, Retirement Contracts, Reinsurance Contracts Held, and Reinsurance Contracts Issued and these belong to the Insurance Contracts Subject Area. Therefore, under the Insurance Contracts Subject Area, these components can be considered as Segments. This represents the Business Segment relationship with its Subject Area.

Insurance Contracts components consist of tables that store Monetary Amounts. As a result, the Insurance Contracts tables that store Monetary Amounts can be grouped under a Tag named "Contract Monetary Amounts". This represents the Business Segment relationship with its Tag.

Tags move across Business Segments. Now, for a given Subject Area, you can search for Monetary Amounts across all Segments with the help of the "Contract Monetary Amounts" tag. Also, you can search for Monetary Amounts across all Subject Areas with any of the Insurance Contracts components as the Segment, with the help of the "Contract Monetary Amounts" tag.

# **6** Data Flow Process for Data Foundation

This section provides information about the data flow process for the Data Foundation application to populate the Result tables.

#### **Topics:**

- Technical Flow to Populate the Result Tables
- Execution Processes

# 6.1 Technical Flow to Populate the Result Tables

This representative data flow diagram of the Data Foundation application illustrates its data flow stages, input and output types, output usage, and the processes that populate results.

**OIDF Execution Tasks** 2. Pass through Result Data Population 3. Result Data Population Claims Admin 1. Staging Data Population (without execution References) (With Execution References) Policy Admin Execute DIM DATES Batch Investment F Execute DIM POLICY Table ALM Systems Τ L Tax Systems Execute DIM ACCOUNT Table Execute Batch to populate Execute DQ Batch or result tables with Execution Execute SCD Batch for Asset Mgmt References **Remaining Dimension Table** D П Cash Processing Seeded Dimensions that are Н populated during application installation Execute Exchange Rates Load to populate Exchange Rates \*DIH or any other applicable Data Integration tool

Figure 8: Representative data flow diagram of the Data Foundation application

The data flow process can be categorized into two main categories. They are:

1. Populating Stage Tables

In this process, data is populated into the Data Foundation Stage master tables and Stage tables using these sub-processes:

- a. Run Custom ETL or DIH.
- **b.** Execute Data Quality batches.
- 2. For more information about loading Stage tables, see the section Loading OFSAA Staging Tables.
- 3. Populating Result Tables

- 4. In this process, data is populated in Dimension and Result tables using Stage tables. The sequence of sub-processes is:
  - a. Dimension Loading Process:
    - i. Populate the DIM\_DATES table.
    - ii. Seeded Dimensions that are populated during the installation process.
    - iii. Populate DIM\_ACCOUNT and DIM\_POLICY tables.
    - iv. Execute other SCD batches to populate corresponding Dimensions.
    - Load key Dimensions using AMHM. ٧.
  - **b.** Loading data into the Result tables using the T2T batch execution process.

These Result tables are used by other Analytical Applications to create reports. Some of the applications are listed here:

- IFRS17
- Solvency II
- **Customer Insight**

#### **Execution Processes** 6.2

This section provides the loading or execution process details of the Seeded Data, SCD, and T2T.

### **Topics:**

- **Prerequisites for the Execution Processes**
- **Dimension Loading Process**
- Seeded Data
- Slowly Changing Dimension (SCD) Process
- **Load Key Dimensions using AMHM**
- Table to Table (T2T) Loading Process

#### **Prerequisites for the Execution Processes** 6.2.1

After OIDF application installation is successfully complete, as a prerequisite to initiate the SCD process or T2T process, follow these steps:

#### **NOTE**

This procedure must be performed once only after a fresh installation of the application and also after installing an upgrade.

In this section, ensure that you execute the batch corresponding to the required Data Quality. To access the Run Name or Batch Name, and the order of execution, see the latest version of Oracle Insurance Data Foundation Application Pack Run Chart.

- 1. Complete the OIDF application installation and post-installation configuration procedures successfully. For detail procedures, see Oracle Insurance Data Foundation Application Pack Installation and Configuration Guide Release 8.1.1.0.0.
- 2. Populate Data into the Stage Master Tables.

Populate data into all the Stage Master tables with all the required records by loading custom ETL or DIH.

NOTE

Data is already loaded into the OIDF Stage Master tables (see the step with Populating Stage Tables in the section Technical Flow to Populate the Result Tables).

3. Populate the DIM\_DATES table.

To populate the DIM\_DATES table, see the section <u>Time Dimension Transformation</u>.

4. Execute the Data Quality (DQ) batches.

Data that is required to execute a DQ is already loaded into the OIDF Stage tables (see the section Technical Flow to Populate the Result Tables).

To execute the DQ batches, see the <u>DQ Group Execution</u> section.

#### 6.2.2 **Dimension Loading Process**

Use one of the following processes to load the data into the Dimension tables:

- **Seeded Data**
- Slowly Changing Dimension (SCD) Process
- **Load Key Dimensions using AMHM**

#### **Seeded Data** 6.2.3

This is an automatic process wherein the Seeded data for Dimensions, which are packaged within the installer, are populated during the installation.

**NOTE** 

To access the Seeded Data for Dimensions, see the latest version of the Oracle Insurance Data Foundation Application Pack Run Chart.

#### **Slowly Changing Dimension (SCD) Process** 6.2.4

A Slowly Changing Dimension (SCD) is a dimension that stores and manages both current and historical data over a period in a data warehouse. SCDs are dimensions that contain data, which changes slowly rather than changing on a time-based regular schedule.

In the SCD process, the SCD batch execution is used to populate data in the Dimension tables.

### **NOTE**

- If you are executing the Dimension SCD Process after a fresh installation or after installing an upgrade, or when there are changes made in the Stage table data, first perform steps given in the section Prerequisites for the Execution Processes.
- Ensure you execute the batch corresponding to the required Dimension table. To access the Run Name or Batch Name, and the order of execution, see the latest version of Oracle Insurance Data Foundation Application Pack Run Chart.
- The SKeys of the Dimension tables are used to structure the Result tables (Fact tables) for populating the data. Therefore, this process serves as the prerequisite to the T2T Loading process.
- For functional information about Dimension loading, see the section About Dimension Loading Process.

To populate data in a Dimension table, follow these procedures:

- 1. Execute the SCD Batch of the DIM\_ACCOUNT table.
- 2. Execute the SCD Batch of the DIM\_POLICY table.
- 3. Execute the DIM INSURANCE SCD Batch.
- 4. Execute the <INFODOM> DATA FOUNDATION SCD batch for the required Dimension table.
- **5.** Verify Log Files and Check Error Messages.

#### **Execute the SCD Batch of the DIM\_ACCOUNT Table** 6.2.4.1

To execute the SCD batch of the DIM\_ACCOUNT table, perform the steps in the following section.

### Topic:

Execute the SCD Batch

#### **Execute the SCD Batch** 6.2.4.1.1

To execute the SCD batch, follow these steps:

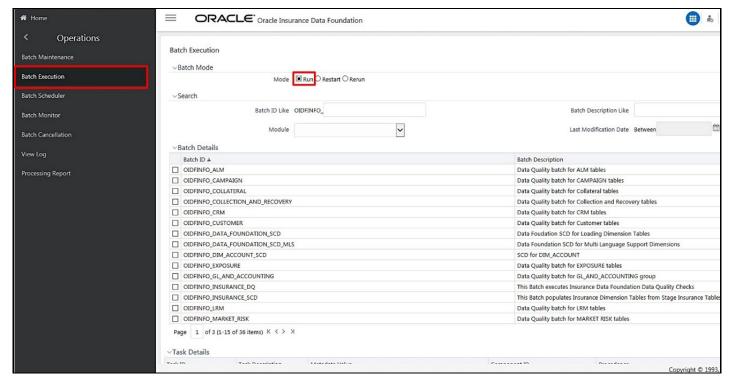
1. Navigate to the **Batch Execution** page.

From OFSAA Home, select Oracle Insurance Data Foundation, select Operations, and then select Batch Execution.

#### 2. Select the **Batch ID**.

The **Batch Execution** page is displayed.

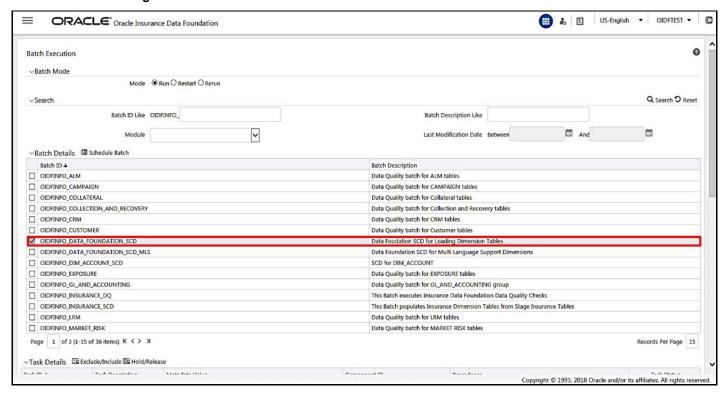
Figure 9: Navigate to the Batch Execution page



**a.** In the Batch Mode section, select the **Run** option.

**b.** In the *Batch Details* section, search and select the required Batch ID.

Figure 10: Select the Batch ID

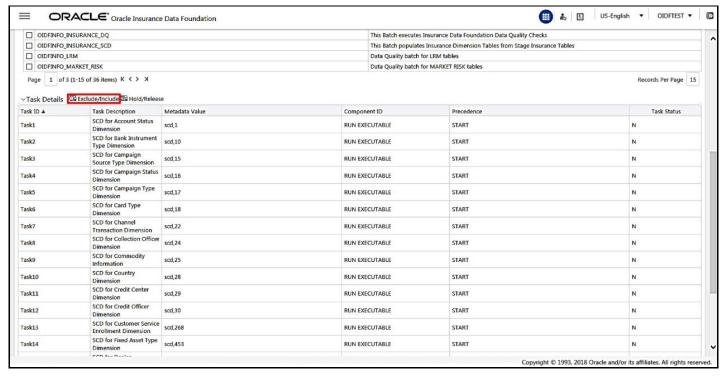


- For the DIM\_ACCOUNT table, select the Batch ID < INFODOM> DIM ACCOUNT SCD.
- For the DIM\_POLICY table, select the Batch ID < INFODOM>\_INSURANCE\_SCD and include only DIM\_POLICY related Stage table tasks.
- For all other Dimension tables, select the Batch ID < INFODOM> DATA FOUNDATION SCD.

The **Task Details** section lists the tasks corresponding to the selected Batch ID. The list consists of all the Stage tables that are mapped to Dimension tables.

**3.** Exclude or include tasks from or into the SCD batch.

Figure 11: Select the task Exclude/Include option



a. Make a note of the Metadata Value (SCD map reference number) and the Task ID for the required Dimension table.

#### **NOTE**

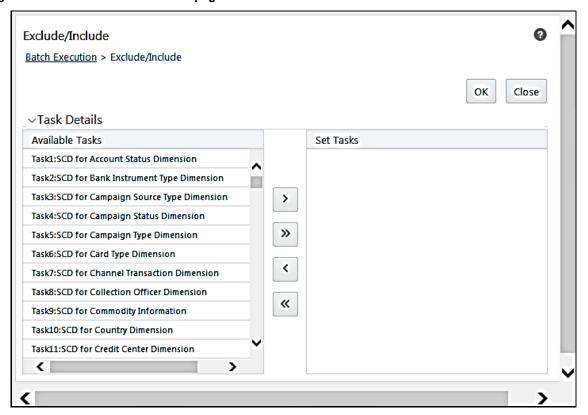
To populate the Dimension table from its corresponding Stage Master table, use SCD packaged in OIDF with the respective Map Reference Number.

**b.** To exclude or include a task from or into the required SCD batch, in the **Task Details** section, click the Exclude/Include icon.

**EXECUTION PROCESSES** 

**c.** The **Task Mapping – Exclude/Include** page is displayed.

Figure 12: The task Exclude/Include page



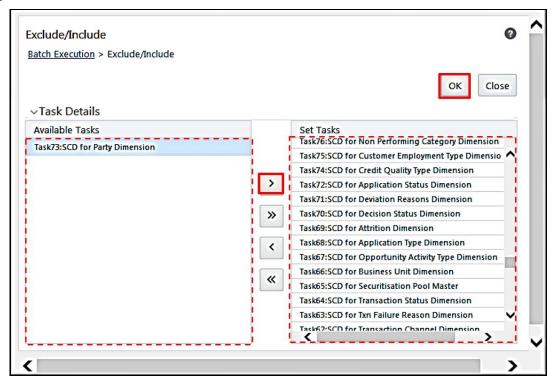
d. Include or exclude the tasks.

In the Task Details section, select the tasks that must be excluded from the batch execution procedure, and click > to move those tasks from the **Available Tasks** section to the **Set Tasks** 

**EXECUTION PROCESSES** 

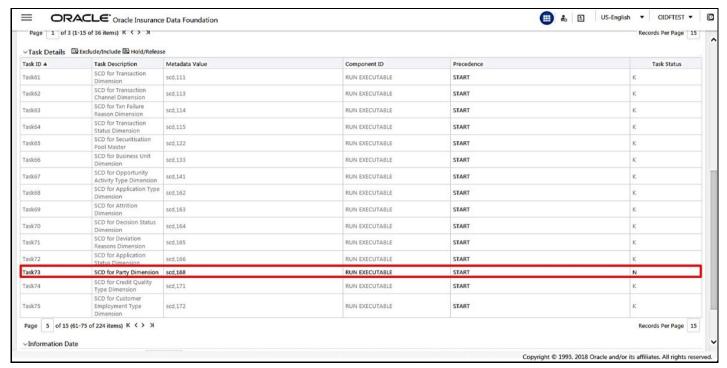
section. The **Available Tasks** list consists of tasks that are available for the execution of Dimension table.

Figure 13: Exclude the Tasks



Confirm the task inclusion or exclusion.

Figure 14: The selected task is listed in the Task Details section



- i. To save the changes, click **OK**. The following warning message is displayed: *If you exclude a task, it will be skipped when executing the batch but, the precedence will not be altered.*Do you want to exclude the selected task(s)?
- ii. To proceed, click OK. The Task Details list consists only of the tasks present in the Available Tasks list. For example, in the following screenshot, the included (highlighted) task, of which the Task Status is N, and this task is executed during the batch execution. The excluded task(s) are displayed in the Grey color with Task Status as K.
- 4. Select the FIC\_MIS date.

In the **Information Date** section, click the calendar icon and select the required date. This date is the FIC\_MIS date populated in the DIM\_DATES table.

ORACLE Oracle Insurance Data Foundation =US-English ▼ OIDFTEST ▼ 0 **(Ⅲ)** ♣ **(Ⅰ** SCD for Txn Failure START SCD for Transaction START Status Dimension SCD for Securitisation Pool Master Task65 RUN EXECUTABLE START SCD for Business Unit START Task66 scd,133 SCD for Opportunity Activity Type Dimens Task67 START SCD for Application Type START Task68 RUN EXECUTABLE SCD for Attrition Task69 RUN EXECUTABLE START SCD for Decision Status Task70 scd.164 RUN EXECUTABLE START SCD for Deviation Task71 scd.165 RUN EXECUTABLE START SCD for Application Task72 RUN EXECUTABLE START scd 166 Task73 SCD for Party Dimension RUN EXECUTABLE START N SCD for Credit Quality Task74 START SCD for Custome Task75 RUN EXECUTABLE START Page 5 of 15 (61-75 of 224 items) K < > X Records Per Page 15 ~Information Date Date 01/01/2019 Execute Batch

Figure 15: Select the FIC\_MIS date and click Execute Batch

**5.** Execute the SCD batch.

Click **Execute Batch** to run the selected SCD batch with one of the following selected task:

- For the DIM\_ACCOUNT table, execute the Batch ID < INFODOM> DIM ACCOUNT SCD.
- For the DIM\_POLICY table, execute the Batch ID <INFODOM>\_INSURANCE\_SCD and include only DIM\_POLICY related Stage table tasks.
- For all other Dimension tables, execute the Batch ID < INFODOM>\_DATA\_FOUNDATION\_SCD.
- 6. Confirm the SCD batch execution.
  - **a.** The following pop-up message is displayed: *Do you want to execute the batch for MIS Date* <*MIS\_Date*>. To execute the batch, click **OK**.

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**b.** The following acknowledgment message is displayed: *Batch triggered successfully. The Batch Run Identification is: <Batch Run ID>*. Click **OK** to continue. The SCD batch is executed. As a result, data is populated in the target Dimension table.

## **6.2.4.2** Execute the SCD Batch of the DIM\_POLICY Table

NOTE

To load data into the DIM\_POLICY table, execute the SCD batch for all the corresponding stage tables.

To execute the SCD batch of the DIM\_POLICY table, see the <a href="Execute the SCD Batch"><u>Execute the SCD Batch</u></a> section.

## **6.2.4.3** Execute the DIM\_INSURANCE\_SCD batch

To execute the DIM\_INSURANCE\_SCD batch, see the Execute the SCD Batch section.

# 6.2.4.4 Execute the <INFODOM>\_DATA\_FOUNDATION\_SCD Batch for the Dimension Table

#### NOTE

If you are executing this Dimension SCD Process after a fresh installation or after installing an upgrade, or when there are changes made in the Stage table data, first perform steps given in the following procedures:

- 1. Prerequisites for the Execution Processes.
- 2. Execute the SCD Batch of the DIM\_ACCOUNT table.
- 3. Execute the SCD Batch of the DIM POLICY table.

To execute the <INFODOM> DATA FOUNDATION SCD batch, follow these steps:

- 1. Verify the presence of data in the Stage Master table.
- 2. Execute the SCD batch.
- **3.** Check the execution status of the SCD batch.

#### **6.2.4.4.1** Verify Presence of Data in the Stage Master Table

Verify if data is present in the Stage master table corresponding to the required Dimension table with all the required records.

**NOTE** 

Data is already loaded into the OIDF Stage Master tables (see the section Technical Flow to Populate the Result Tables).

### 6.2.4.4.2 Execute the SCD Batch

To execute the SCD batch, see the <u>Execute the SCD Batch</u> section.

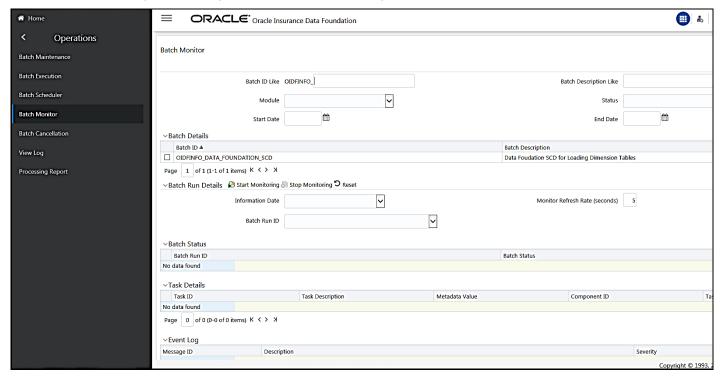
#### **Check the Execution Status of the SCD Batch** 6.2.4.4.3

To check the execution status of the SCD batch, follow these steps:

1. Navigate to the **Batch Monitor** page.

From OFSAA Home, select Oracle Insurance Data Foundation, select Operations, and then select **Batch Monitor.** 

Figure 16: Navigate to the Batch Monitor page

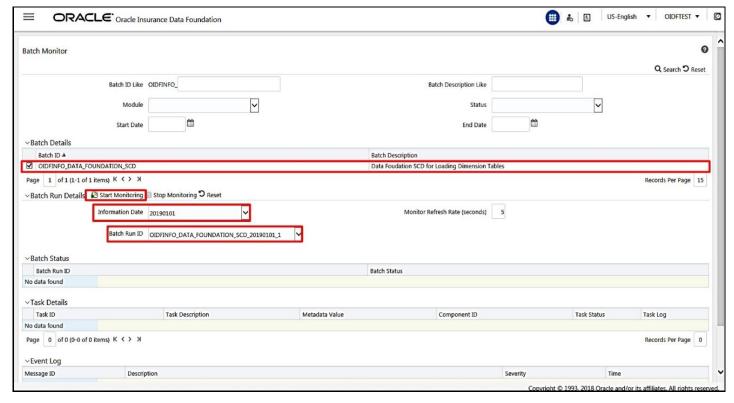


2. Select the Batch ID <INFODOM>\_DATA\_FOUNDATION\_SCD.

The Batch Monitor page appears on the right-hand side. In the Batch Details section, select the Batch ID that was executed during the Execute the SCD Batch step, that is, select the <infodom>\_data\_foundation\_scd Batch ID.

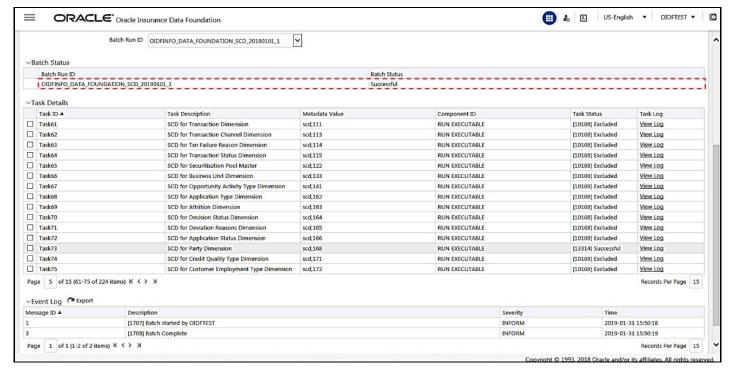
3. Select the FIC\_MIS Date and Batch Run ID.

Figure 17: Select the Batch ID, FIC\_MIS Date, and Batch Run ID



- a. In the Batch, Run Details section, click the Information Date box and select the required FIC\_MIS Date. The SCD batch was executed on this date.
- **b.** Then click the **Batch Run ID** box and select the required value.
- c. Click the **Start Monitoring** icon.
- **4.** Check the Batch status.

Figure 18: Batch execution status



In the **Batch Monitor** page, the Batch Status, Task Details, and Event Log sections are displayed in addition to the existing details.

The following are the types of Status messages:

- Not Started
- Ongoing
- Failure
- Successful

When a Batch Status is indicated as Successful, valid data is populated in the Dimension table.

## 6.2.4.5 Verify Log Files and Check Error Messages

Use one of these two methods to access the SCD batch execution log files to view the complete log generated during the SCD batch execution:

- View and download the log files from the application UI.
- View log files in the application server.
- Check error messages.

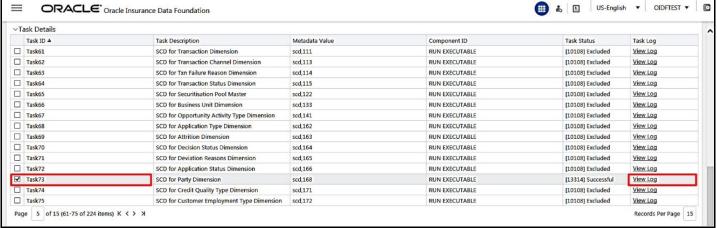
### 6.2.4.5.1 View and Download the Log Files from the Application UI

To view and download the log files from the application UI, follow these steps:

In the Task Details section, select the task that was executed and click View Log.

**EXECUTION PROCESSES** 

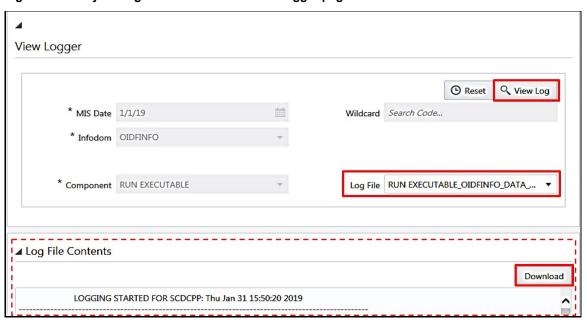
Figure 19: Select View Log for the Task that was included in the Batch execution



2. Select and view the log file.

The View Logger page is displayed.

Figure 20: Verify the log file content in the View Logger page



In the **Log File** box, select the required file, and then click **View Log**. The complete log information is displayed in the *Log File Contents* section.

Two types of log files are generated:

- SCDCPP.log
- FICGEN.log
- **3.** To download a copy of the log file content to the system, click **Download**.

### **6.2.4.5.2** View Log Files in the Application Server

To view the execution log file on the application server, verify the files in the following directory:

ftpshare/logs/<Run Date>/<infodom>/RUN EXECUTABLE

NOTE

For comprehensive information on the configuration and execution of a batch, see the <u>Oracle Financial Services Advanced Analytical Applications</u> Infrastructure User Guide Release 8.1.1.0.0.

### 6.2.4.5.3 Check the Error Messages

To check the error messages, open the log file present in the ftpshare/logs/<Run Date>/<infodom>/RUN EXECUTABLE directory for the Dimension tables.

### **6.2.4.6** Post SCD Process

When the SCD process is complete, individual numeric Surrogate Keys are generated for each identifier associated with that Dimension table. This SKey is unique within each Dimension table. The SKeys of the Dimension table is used to structure the resulting tables (Fact tables) for populating the data.

The Dimension table is joined with the Reporting or Processing tables.

**NOTE** 

To access the list of all Stage Master tables, see the SYS\_TBL\_MASTER table.

To check the mapping from a Stage table column to the Dimension table column, see the SYS\_STG\_JOIN\_MASTER table using Map Reference Number.

For more information about the Dimension table loading process, see the chapter <u>About Dimension Loading Process</u>.

# **6.2.5** Load Key Dimensions using AMHM

For more information about loading the Dimensions using AMHM, see the *Dimension Management* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u> and *Dimension Load Procedure* section in the <u>Oracle Financial Services Analytical Applications Data Model Utilities User Guide</u>.

# **6.2.6** Table to Table (T2T) Loading Process

After OIDF is installed successfully, the following standard Run pipelines (PMF processes) are available out-of-the-box in the PMF:

- Oracle Insurance Data Foundation Source Run: This Run pipeline (Process) loads all non-Run
  enabled tables in OIDF. For data movement from Stage tables to Result tables, this Run can be
  executed once per day, where the Result tables do not consist of Run SKey.
- Oracle Insurance Data Foundation Execution Run: This Run pipeline (Process) loads all Run enabled tables in OIDF. For data movement from Stage tables to Result tables, this Run can be executed any number of times per day with each unique Run SKey.

#### NOTE

If you are following this T2T Process after the first-ever application installation or after the upgrade installation, then perform steps in these procedures:

- 1. Prerequisites for the Execution Processes.
- 2. Execute the SCD Batch of the DIM\_ACCOUNT table.
- 3. Execute the SCD Batch of the DIM\_POLICY table.
- **4.** Execute the DIM\_INSURANCE\_SCD Batch.
- 5. Execute the <INFODOM>\_DATA\_FOUNDATION\_SCD batch for the required Dimension table.

To access the Run Name and their order of execution, see the latest version of the Oracle Insurance Data Foundation Application Pack Run Chart.

For information about loading multiple load runs, see the chapter **Loading Multiple** Load Runs in OFSAA.

To create a custom Run process in PMF, see the Configure and Manage Custom Pipelines for OIDF Functions section.

To create a T2T, see the *Data Management Framework* section in the <u>Oracle</u> Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

For illustration, the Oracle Insurance Data Foundation Source Run process is primarily used.

To load all **non-Run** enabled tables in OIDF using the out-of-the-box Oracle Insurance Data Foundation Source Run process, or to load all **Run** enabled tables in OIDF using the out-of-the-box Oracle Insurance Data Foundation Execution Run process, perform the steps in the following section:

- 1. Prerequisites for loading T2T
- 2. Select the Run Parameters and Execute the Run
- **3.** Verify the Run Execution
- 4. Check Error Messages
- **5.** Post T2T Process

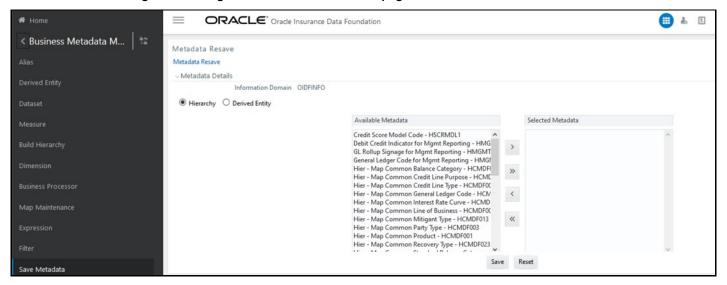
**EXECUTION PROCESSES** 

#### **Prerequisites for Loading T2T** 6.2.6.1

To resave the hierarchies, follow these steps:

1. From OFSAA Home, select Oracle Insurance Data Foundation, select Unified Analytical Metadata, select Business Metadata Management, and then select Save Metadata. The Metadata Resave page is displayed.

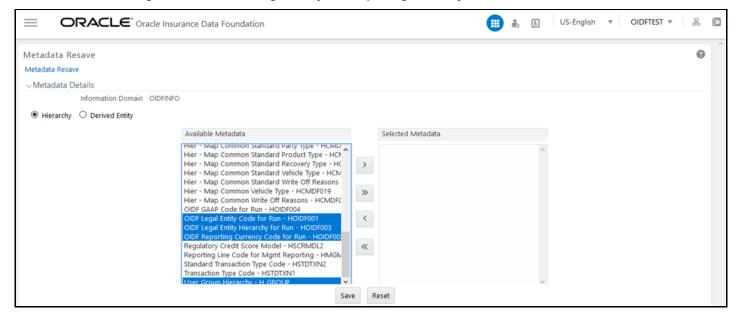
Figure 21: Navigate to the Metadata Resave page



- 2. In the Metadata Resave page, to load values for the Reporting Currency parameter and the Legal Entity parameter, select the following hierarchies:
  - Legal Entity Code for Run (HOIDF001)
  - Reporting Currency Code for Run (HOIDF002)
  - Legal Entity Hierarchy for Run (HOIDF003)
  - User Group Hierarchy (H\_GROUP)

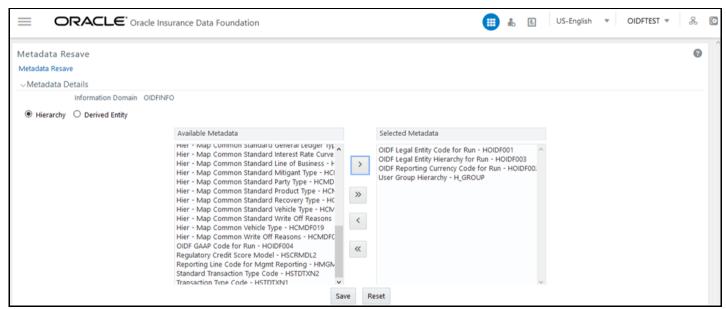
Move the selected hierarchies from **Available Metadata** to **Selected Metadata**.

Figure 22: Select the Legal Entity and Reporting Currency hierarchies



3. To save the selection, click **Save**. Or to reset the details and start-over, click **Reset**.

Figure 23: Save the selected hierarchies



After saving the hierarchies, select the Run parameters and execute the Run.

#### 6.2.6.2 Select the Run Parameters and Execute the Run

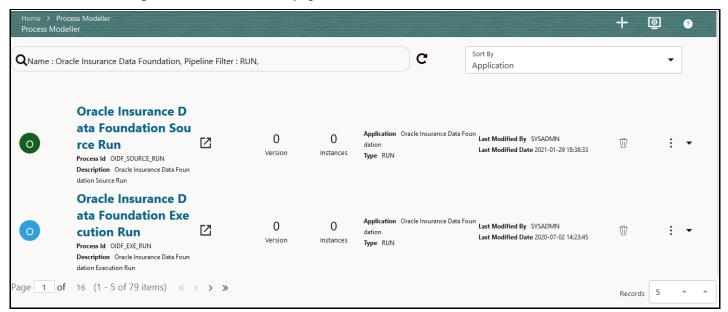
To select the Run parameters and execute the Run, follow these steps:

1. From OFSAA Home, select Oracle Insurance Data Foundation, click Administration Information Domain list, select the information domain required for OIDF, and then click the Process Modelling Framework tile.

A submenu is displayed. Click **Process Modeller** to access the **Process Modeller** page.

In the following illustration, the Oracle Insurance Data Foundation Source Run process and Oracle Insurance Data Foundation Execution Run process are shown.

Figure 24: Process Modeller page with OIDF Source Run and OIDF Execution Run Process

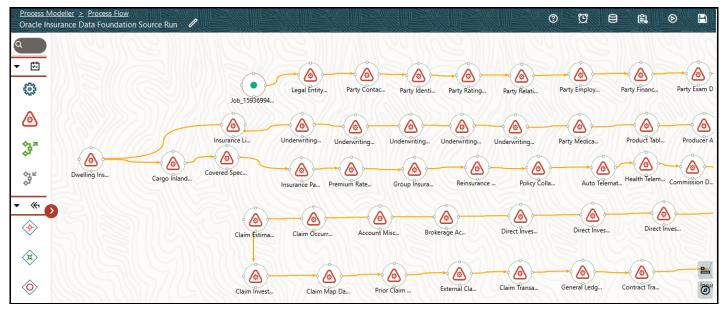


2. Select the Oracle Insurance Data Foundation Source Run process. The corresponding process flow is displayed in a page. The **Process Flow** canvas contains a toolbar and a drawing canvas. Use the drawing canvas to design the process flow with the **Activity**, **Transition**, and **Widget** components available in the floating toolbar with Sub Pipeline (sub-process) activity as the base.

Each Sub Pipeline activity represents each of the Data Load process in the OIDF Source Run, and Average Balances process. The Sub Pipeline activities are executed in a series.

The following illustration is for the Oracle Insurance Data Foundation Source Run process.

Figure 25: OIDF Source Run Process Flow



The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

Figure 26: OIDF Execution Run Process Flow



- 3. Double-click a Sub Pipeline activity to see the details related to its **Sub Process Details**.
  - The following illustration is for the Oracle Insurance Data Foundation Source Run process.

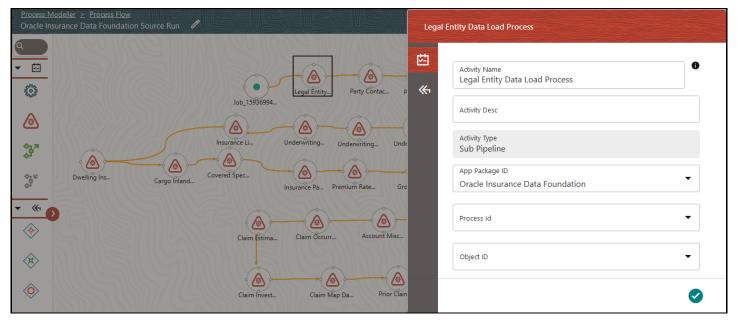
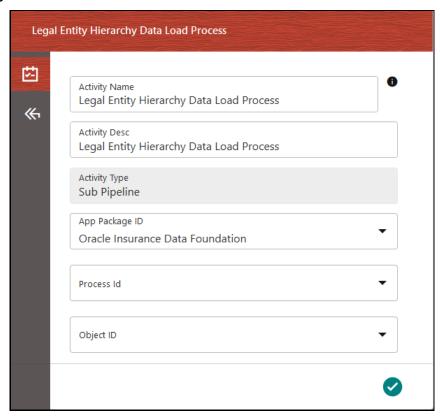


Figure 27: OIDF Source Run Process with Sub Process Details

The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

Figure 28: OIDF Execution Run Process with Sub Process Details



- 4. On the drawing canvas, select the **Definition**, **Application Rule**, and **Data Fields** icons to see the respective details.
  - The following illustrations are for the Oracle Insurance Data Foundation Source Run process.

Figure 29: OIDF Source Run Process with Definition Details



Application Rule Search + Name Default Default Type SQL Rule Outcome Reject Name Outcome Approve Type Outcome Outcome Approve Rule Outcome Reject Rules Name Outcome Reject Type Outcome Outcome Reject Rule Outcome Reject Rules

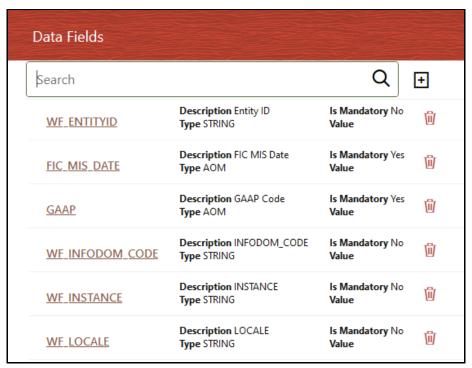
Name Outcome Submit

Rule Outcome Reject

Figure 30: OIDF Source Run Process with Application Rule Details

Figure 31: OIDF Source Run Process with Data Fields Details

Outcome Submit



Type Outcome

Rules

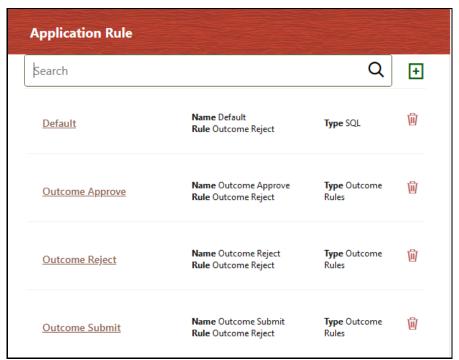
媊

The following illustrations are for the Oracle Insurance Data Foundation Execution Run process.

Figure 32: OIDF Execution Run Process with Definition Tab Details



Figure 33: OIDF Execution Run Process with Application Rule Tab Details

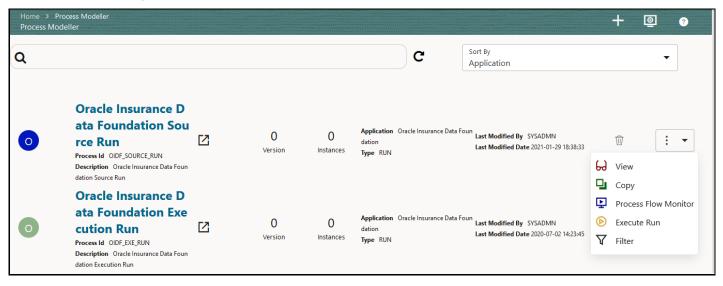


Data Fields + Search **Description** Consolidation Is Mandatory Yes **CONSOHIER** Hierarchy Value Type AOM **Description** Consolidation Type Is Mandatory Yes 偷 CONSOTYPE Type AOM Value **Description** Entity ID Is Mandatory No 偂 WF\_ENTITYID Type STRING Value **Description FIC MIS Date** Is Mandatory Yes 喻 FIC\_MIS\_DATE Type AOM Value **Description GAAP Code** Is Mandatory Yes 喻 **GAAP** Type AOM Value

Figure 34: OIDF Execution Run Process with Data Fields Tab Details

- 5. In the **Process Modeller** page, click corresponding to the Insurance Liability Contracts Data Load Process that must be executed. Click Execute Run. A Job ID is created in the Process Monitor page for each Sub Pipeline (sub-process) and every time a process is executed.
  - The following illustration is for the Oracle Insurance Data Foundation Source Run process.

Figure 35: OIDF Source Run Process - Select Execute Run



The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

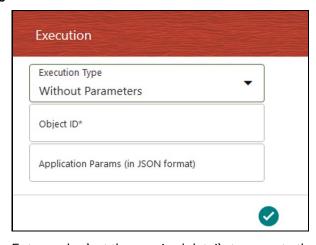
**EXECUTION PROCESSES** 

C Q Application **Oracle Insurance D** ata Foundation Sou Application Oracle Insurance Data Foun Last Modified By SYSADMN 0 0  $\square$ 0 rce Run Last Modified Date 2021-01-29 18:38:33 Version Instances Type RUN Process Id OIDF\_SOURCE\_RUN Description Oracle Insurance Data Foun dation Source Run **Oracle Insurance D** ata Foundation Exe Application Oracle Insurance Data Foun Last Modified By SYSADMN 0 0  $\square$ cution Run dation Last Modified Date 2020-07-02 14:23:45 Version Instances Type RUN Process Id OIDF\_EXE\_RUN 6 View Description Oracle Insurance Data Foun dation Execution Run Copy Page 1 of 16 (1 - 5 of 79 items) « < > » Process Flow Monitor Execute Run Y Filter

Figure 36: OIDF Execution Run Process - Select Execute Run

- **6.** The **Execution** page is displayed with the Run parameters.
  - The following illustration is for the Oracle Insurance Data Foundation Source Run process (and for the Oracle Insurance Data Foundation Execution Run).

Figure 37: OIDF Source Run and OIDF Execution Run Processes - Execution Page Without Parameters



Enter and select the required details to execute the Run without parameters.

To execute the Run with parameters, select With Parameters in the Execution Type list.

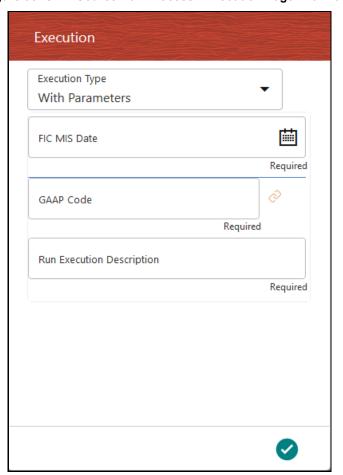


Figure 38: OIDF Source Run Process - Execution Page With Parameters

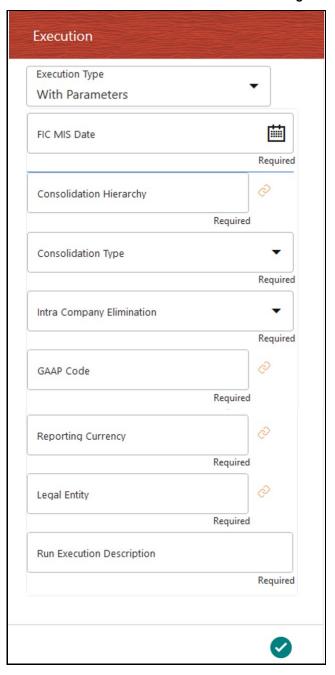


Figure 39: OIDF Execution Run Process - Execution Page With Parameters

Select or enter the required values for each field as follows.

Table 7: Insurance Liability Contracts Data Load Process - Execution Page With Parameters and description

Field Name	Description or Instruction
Reporting Currency	Use the icon to select the Reporting Currency Code used to calculate the amount during the data population in the target table.

Field Name	Description or Instruction
Legal Entity	Use the icon to select the Legal Entity Code to identify the legal entity used for the Run.
Consolidation Type	Select the Consolidation Type of legal entities on a solo or consolidation basis. In a Solo Run, only the selected legal entity is used. In a Consolidated Run, along with the selected legal entity, all its child legal entities are also used.
Intra Company Elimination	Select the Intra Company Elimination type to eliminate (YES) or skip the elimination (NO) of Intra Company Accounts during a Consolidated Run.
Consolidation Hierarchy	Use the icon to select the Legal Entity Hierarchy used for the consolidated run. This parameter is not required for the Solo Run.
GAAP Code	Use the icon to select the required accounting standard.
FIC MIS Date	Use the calendar icon to select the extraction date.
Run Execution Description	Enter a longer description of the Run.

**7.** To save the details, click

#### NOTE

The execution of the Oracle Insurance Data Foundation Source Run process is triggered using the selected FIC MIS DATE. The Run SKey is generated and inserted into the DIM\_RUN table. For the Run SKey generated, the corresponding user-selected Run parameters are inserted into the RUN\_EXE\_PARAMETERS table.

8. To verify the Run execution status of the Oracle Insurance Data Foundation Source Run process (or the Oracle Insurance Data Foundation Execution Run process), see the Verify the Run Execution section.

NOTE

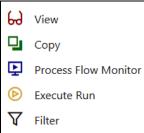
To abort, resume, or rerun the Run Pipeline process in the **Process Monitor** page, see the <u>Abort, Resume, or Rerun the Process</u> section.

#### 6.2.6.3 **Verify the Run Execution**

To verify the Run execution status of the Oracle Insurance Data Foundation Source Run process (or the Oracle Insurance Data Foundation Execution Run process), follow these steps:

**EXECUTION PROCESSES** 

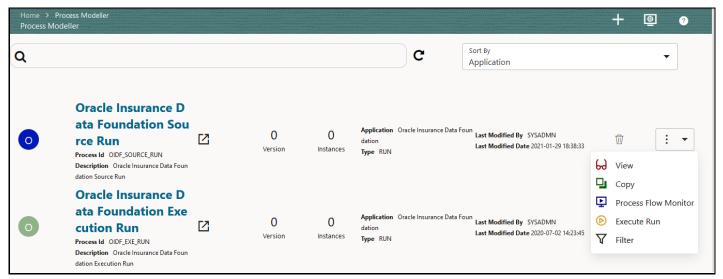
1. To open the **Process Monitor** page, in the **Process Modeller** page, click or select **Process Flow** 



Monitor from the Process Modeller menu

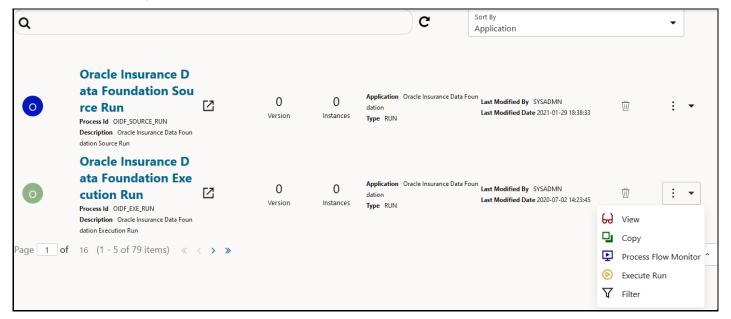
The following illustration is for the Oracle Insurance Data Foundation Source Run process.

Figure 40: OIDF Source Run Process – Select Process Flow Monitor



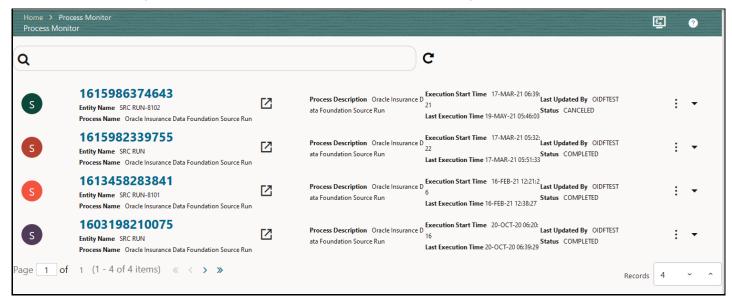
• The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

Figure 41: OIDF Execution Run Process - Select Process Flow Monitor



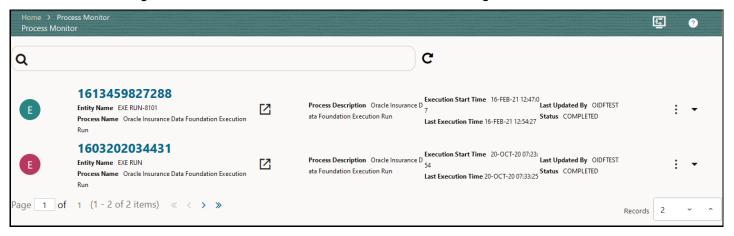
- 2. The Process Monitor page opens displaying all the Run instances corresponding to the Insurance Liability Contracts Data Load Process. In the **Process Monitor** page, for the required Run pipeline (process) that was executed, search the Run instance by Job ID, or by the Process Name Oracle Insurance Data Foundation Source Run (or Oracle Insurance Data Foundation Execution Run), and select the Run process instance.
  - The following illustration is for the Oracle Insurance Data Foundation Source Run process.

Figure 42: OIDF Source Run Process - Process Monitor Page - Select Job ID



The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

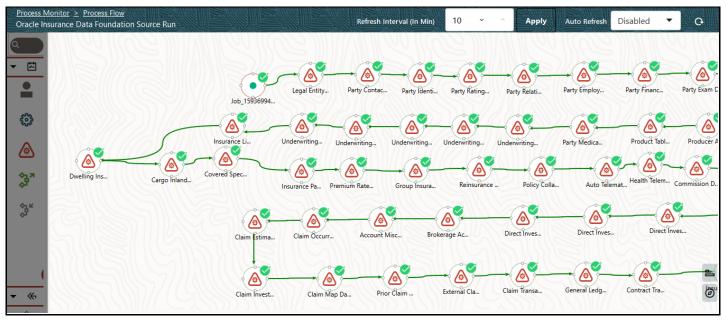
Figure 43: OIDF Execution Run Process – Process Monitor Page – Select Job ID



3. A status page opens, which displays the execution status of the executed Run instance.

The following illustration is for the Oracle Insurance Data Foundation Source Run process.

Figure 44: OIDF Source Run Process - Run Execution Status



The following illustration is for the Oracle Insurance Data Foundation Execution Run process.

Figure 45: OIDF Execution Run Process - Run Execution Status



**d.** To verify the execution status for a Sub Pipeline, double-click the Sub Pipeline. The execution status related to the Sub Pipeline is displayed. In this illustration, the Legal Entity Data Load Process sub pipeline is used.

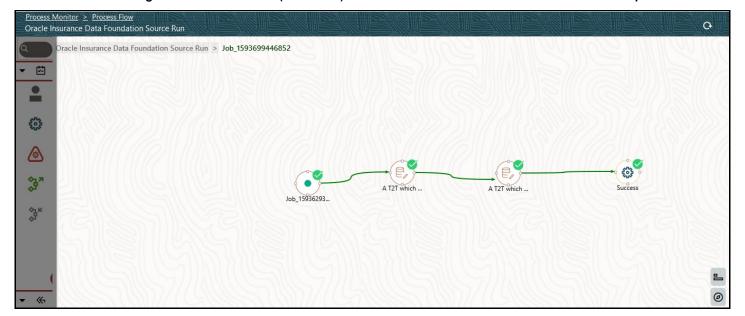
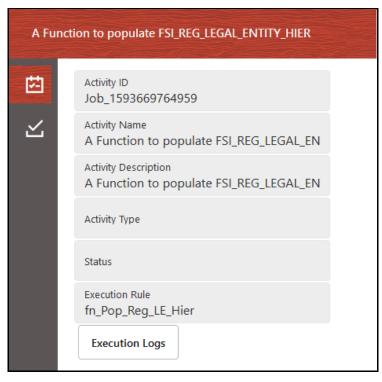


Figure 46: OIDF Sourced (Execution) Run Process - Run Execution Status of the Sub Pipeline

i. To verify the execution log of a T2T in the Sub Pipeline, double-click the required T2T widget. A page is displayed containing the Activity Definition and Activity Logs details. In the Activity Definition tab, click the **Execution Log**.

Figure 47: Activity Definition and Activity Logs details for T2T Run Execution in the OIDF Sourced (or **Execution) Run Process** 



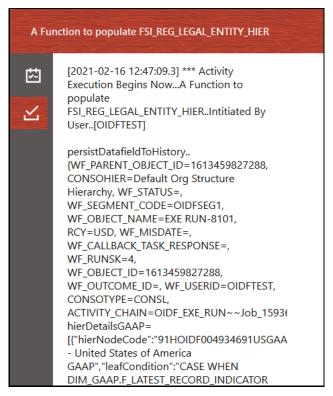
ii. The **Execution Logs** page is displayed. Select the required **Log File** in the list and click View Log.

**iii.** The log details are displayed in the Log File Contents section. To download a copy of the log details, click **Download**.

The following two types of log files are generated:

- T2T.log
- T2TCPP.log
- **e.** In the Sub Pipeline Run Execution Status page, to see the activity log corresponding to the executed T2T, click.

Figure 48: Activity Logs of a T2T in OIDF Sourced (Execution) Run Process



For information about the complete functioning of the PMF, see the <u>Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0</u>.

To design and execute a custom Oracle Insurance Data Foundation Source Run process, see the <u>Configure</u> and <u>Manage Custom Pipelines for OIDF Functions</u> section.

## 6.2.6.4 Check Error Messages

To check the error messages, see the log file present in the

ftpshare/logs/<Run Date>/<infodom>/LOAD DATA directory for any T2T.

#### 6.2.6.5 **Post T2T Process**

When the T2T process is complete, data is populated in the Result tables.

#### **NOTE**

AAI\_DMT\_MAPPING\_DETAILS table contains all the Stage, Dimension, and Fact tables. This table contains details about what source table-column level mapping must be done to the Result <TABLE>.<COLUMN>.

AAI\_DMT\_DEF\_SOURCE\_ENTITY table contains all the Expressions.

AAI\_DMT\_DEFINITION table contains all the Join conditions.

Each Join query must contain SKey. The join between a Dimension table and Fact table is based on the SKey.

## 7 Time Dimension Table

This section provides information about populating Time Dimension Transformation in the Data Foundation application and step-by-step instructions to use this section.

Business data commonly represents information as of a point in time (for example, a balance as of a point in time) or as of a particular span of time (for example, income for the month of March). The rollup of a particular balance depending on their nature could be a simple additive rollup wherein the child member balances are added up to arrive at the parent node balance (for example, Ending Balance) or non-additive rollups wherein a node formula are used to specify how to roll up the child member balances (for example, 3 months rolling average).

#### **Topics:**

- Overview of Time Dimension Population
- Prerequisites
- Tables Used by the Time Dimension Population Transformation
- Executing the Time Dimension Population Transformation
- Checking the Execution Status

## 7.1 Overview of Time Dimension Population

The Time dimension population transformation is used to populate the DIM\_DATES table with values between two dates specified by the user.

The database components, used by the transformations are:

- 1. Database function FN\_DIM\_DATES
- Database procedure PROC\_DIM\_DATES\_POPULATION that is called by the function FN\_DIM\_DATES mentioned earlier.

## 7.2 Prerequisites

The following are the prerequisites for Time dimension population.

- All the post install steps mentioned in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u> and <u>Oracle Insurance Data Foundation Application Pack Installation and Configuration Guide Release 8.1.1.0.0</u> must be completed successfully.
- 2. Application User must be mapped to a role that has seeded batch execution function (BATPRO).
- 3. Before executing a Batch, check if the following services are running on the application server:
  - Iccserver
  - Router
  - AM Server
  - Message Server
  - OLAP Server

- **4.** For more information on how to check if the services are up and on and how to start the services if you find them not running, see the <u>Oracle Financial Services Advanced Analytical Applications</u> Infrastructure User Guide Release 8.1.1.0.0.
- **5.** Create batches to execute the function. For more details, refer to section <u>How to Define a Batch</u>.

# 7.3 Tables Used by the Time Dimension Population Transformation

For more details on viewing the structure of earlier tables, see the <u>Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x</u> or the OIDF Data Model.

## 7.4 Executing the Time Dimension Population Transformation

You can execute the function from the Operations (formerly Information Command Center (ICC) framework) module of OFSAAI.

This component for OIDF has been seeded with the Batch ID <INFODOM>\_DATA\_FOUNDATION\_SCD, which can be executed from Batch Execution section of OFSAAI. In the Parameter List, enter the Start Date and End Date. For example 19940101, 19941231.

#### **NOTE**

You can load DIM\_DATES for a fiscal year for ONE jurisdiction at a time. However, if the dates are populating incorrectly for the selected Jurisdiction, you should revisit the values entered in the DIM\_FINANCIAL\_YEARS TABLE and then repopulate the DIM\_DATES.

You can also define a new Batch and an underlying Task definition from the Batch Maintenance page of OFSAAI. For more information on defining a new Batch, see the *How to Define a Batch* section.

To define a new task for a Batch definition:

- 1. Select the check box adjacent to the newly created Batch Name in the **Batch Maintenance** page.
- 2. Click Add (+) button from the Task Details grid. The Task Definition page is displayed.
- 3. Enter the **Task ID** and **Description**.
- 4. Select **Transform Data** component from the drop down list.
- **5.** Select the following from the **Dynamic Parameters** list:
  - Datastore Type Select the appropriate datastore type from the list.
  - Datastore Name Select the appropriate datastore name from the list.
  - IP address Select the IP address from the list.
  - Rule Name Select fn\_DimDates from the drop down list of available transformations. (This is a seeded Data Transformation which is installed as part of the OIDF solution installer. If you do not see this in the list, contact My Oracle Support)
  - Parameter List Enter the Start Date and End Date.

- Start Date This is the starting date, from which the Transformation will populate DIM\_DATES table. This date should be specified in 'YYYYMMDD' format.
- For example, '20081131'.
- End Date This is the end date, to which the Transformation will populate DIM\_DATES table. This date should also be specified in 'YYYYMMDD' format.

For example, '20091231'.

- 6. Click Save. The Task definition is saved for the selected Batch.
- **7.** Execute the batch.

You can execute a Batch definition from the Batch Execution section of OFSAAI Operations module. The function can also be executed directly on the database through SQLPLUS Details are:

Function Name: FN\_DIM\_DATES

Parameters: P\_BATCH\_RUN\_ID, P\_AS\_OF\_DATE, P\_ST\_DT, and P\_ED\_DT Sample Parameter Values: 'Batch1', '20091231', '20081131', and '20091231'

NOTE

Execute this DT for each year for which data is present in the source table.

#### **Checking the Execution Status 7.5**

To check the SCD batch execution status of Time Dimension Transformation, follow the procedure Check the Execution Status of the SCD Batch.

To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and Check Error Messages.

# **8** Loading Multiple Load Runs in OFSAA

This section provides information about Loading Multiple Load Runs in OFSAA in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

#### **Topics:**

- Objective
- Design Details
- Implementation
- Loading OFSAA Staging Tables
- Post Stage Load Process
- Loading Data into OFSAA Results Tables from Staging Tables

Multiple load run enables data to be loaded multiple times during the day for staggered processing of data by analytical applications. The degree of complexity of data required by analytical apps vary from one to the other, the load run ensures that the customer can process the data as soon as it is ready for an app to uptake. This reduces the turnaround time to reporting, by avoiding the 'end of day' type of processing of information as part of the original design.

**NOTE** 

As a work around, currently you can use the following methods to load the results table using different Load Run IDs.

## 8.1 Objective

The following are the objectives of loading multiple Load Runs in OFSAA:

- 1. To optimize the end-to-end data flow and the need for intra-day reporting, institutions could load intra-day records into OFSAA. Current application can only handle one set of records per date (incremental loads are not possible).
- 2. Users need to adjust and reload data (either full or partial) for the current date.
- 3. Users need to adjust and reload data (either full or partial) for any of past dates.
- **4.** Support incremental consumption of data from staging area.

**NOTE** 

The load run is enabled only in the model and is '0' by default in the model. This does not impact data previously available. The enhancements to the OFSAA batch and run framework to cover all the use cases will be taken in a future release.

This release of the OIDF staging model provides a flexibility to load multiple snapshots of the data in the staging tables (Product Processors). A column named N\_LOAD\_RUN\_ID is introduced as part of the primary key of the product processor tables to enable this feature. However, the full fledged functionality to load and manage these snapshots will be part of the platform release at a later stage. In order to

leverage this design in this release, the below mentioned changes should be performed as a workaround to load multiple snapshot of data from staging to results tables such as Fact Common Account Summary.

For Loading multiple snapshots of data for the same FIC\_MIS\_DATE, the existing T2T's should be executed through the Run Rule Framework . Additionally, the load should be filtered accordingly for each load run via the run filter.

To execute this run:

- 1. Navigate to \$FIC HOME/ficweb/webroot/conf
- 2. Edit the file: excludeURLList.cfg
- 3. Add the following entry at the end of the file: [SQLIA]./pr2

**NOTE** 

There should not be any blank line in the file.

## 8.2 Design Details

Loading of data into OFSAA can be in any of the following ways:

- ETL Tool
- OFSAA F2T
- OFSAA T2T
- OFSAA Excel upload
- OFSAA DIH

OFSAA data model includes load run identifier as part of the primary key for a set of staging tables. This enables data to be stored for multiple load runs for any date. OFSAA data model also has a table to maintain master information about load run and can be used for identifying or filtering load run during run execution within OFSAA.

## 8.3 Implementation

Before loading data into the staging table, generate a Load Run Identifier to stamp the records from the source. These records can be a complete snapshot or can be partial or incremental data too. This load run identifier can be generated by calling the function in the OFSAA atomic schema named FN\_REGISTER\_LOAD\_RUN. The function expects some input parameters and returns a unique load run identifier back to the calling program.

Generate new Load Register the details Use the Run ID in Run ID by calling FN\_REGISTER\_LOAD of loading by calling FN\_REGISTER\_LOAD Load OFSAA Staging ETL to load OFAA Stage \_RUN \_RUN Populate Update the entry in FSI\_ACCOUNT\_LOAD Load type is REV\_LOAD\_RUN\_ \_RUN\_MAP by calling FN\_POP\_LOAD\_RUN\_ Incremental or a End MASTER as Snapshot Completed MAP

Figure 49: Load Run process flow

**NOTE** 

Column n\_load\_run\_id should always be populated only by the value returned by fn\_register\_load\_run.

Function - Register Load Run (fn\_register\_load\_run)

Parameters - Batch ID, MIS-Date, Load Run Name, Load Run Purpose, Load Run Type

Table 8: Parameters of FN	REGISTER	LOAD RUN

Parameters	Source Of Values	Example Values
Batch ID	Auto generated if you are using OFSAA Framework	OFSOIDFIN- FO_20150101_1
MIS-Date	Input from Customer	01/01/2015
Load Run Name	Input from Customer	Daily EOD Load
Load Run Purpose	Input from Customer	BA/BS (BASEL Advanced Approach, BASEL Standard)
Load Run Type	Input from Customer	B - Base, A - Adjustments, P- Backdated Adjustments

## Example:

```
Declare
Result number;
Begin
Result: = fn_register_load_run
('OFSOIDFINFO 20150101 1','20150101','OIDF LOAD','BA', 'A');
End;
```

The function registers the request in the table name REV\_LOAD\_RUN\_MASTER and marks load as "In progress". You can use columns LOAD\_RUN\_NAME and LOAD\_PURPOSE as per the requirement.

Column Load Type must have only the permissible value such as:

- "B Base
- "A Adjustments
- "P- Backdated Adjustments

Table 9: Column values for LOAD\_RUN\_NAME and LOAD\_PURPOSE

LOAD_R	MIS_DA	LOAD_T	LOAD_PUR	START_DT_	LOAD_RUN_	BATCH_ID	LOAD_RUN_
UN_I D	TE	YPE	POSE	TIME	NAME		STATUS
1	01-JAN-15	A	ВА	01-JAN-15	OIDF_Load	OFSOIDFIN FO_201501 01 _1	In Progress

**NOTE** 

Multiple calls to the procedure can be made to the function for given FIC\_MIS\_DATE. Each call will return a number which will be unique across the FIC\_MIS\_DATE or Extraction date. You can use this load identifier to load either one or more staging tables.

## 8.4 Loading OFSAA Staging Tables

After the load run ID is generated as described above, you can use the same in external ETL process to stamp the records from the source system before them loading either in one or the multiple staging tables of OFSAA Staging area.

Load strategy at a customer site falls across two categories:

- Complete Snapshot
- <u>Incremental Snapshot</u>

## 8.4.1 Complete Snapshot Load Example

For example, if we have three Loan Contract accounts in a bank system which is supposed to be loaded into OFSAA Stage Loan Contracts using the Load Run ID = 1 for BASEL Standard Approach, the data after loading staging table will appear as below:

**Table 10: Complete Snapshot Load example** 

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	N_EOP_BAL
01-JAN-15	LOAN1000	USGAAP	1	4066.213

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	N_EOP_BAL
01-JAN-15	LOAN1001	USGAAP	1	34538.905
01-JAN-15	LOAN1002	USGAAP	1	667.357

NOTE

After each load you need to run fn\_register\_load\_details function mentioned in Post Stage Load Process and Updating Load as Completed which is explained in the following sections.

In order to enable downstream applications to consume only the latest set of record, you need to call another function named FN\_POP\_LOAD\_RUN\_MAP. This is mandatory in case of incremental snapshot load scenario. This function populates a intermediate processing table that keep track of latest incoming record identifier.

Function - Populate Load Run Map

Parameters - Batch Id, MIS Date, Stage Table Name, Load Run Id, Load Run Name

**Table 11: Populate Load Run Map Example** 

Parameters	Source of Values	Example Values
Batch ID	Auto generated if you are using OFSAA Framework	OFSOIDFIN- FO_20150101_1
MIS-Date	Input from Customer	01/01/2015
Stage Table Name	Input from Customer	STG_ANNUITY_CONTRACTS
Load Run ID	Input from Customer	1
Load Run Name,	Input from Customer	OIDF_Load

### Example:

```
Declare
Result number;
Begin
Result: =
fn_pop_load_run_map('OFSOIDFINFO_20150101_1','20150101','STG_ANNUITY_CONTRACTS'
,1,'OIDF
LOAD');
END;
```

NOTE

For troubleshooting any errors while making the function calls, refer to FSI\_MESSAGE\_LOG table for more details.

For the example mentioned above, records in FSI\_ACCOUNT\_LOAD\_RUN\_MAP table appears as follows.

Table 12: Records in the FSI\_ACCOUNT\_LOAD\_RUN\_MAP table

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	F_LATEST_LOAD_RUN_FLAG
1-Jan-15	LOAN1000	USGAAP	1	Υ
1-Jan-15	LOAN1001	USGAAP	1	N
1-Jan-15	LOAN1002	USGAAP	1	N
1-Jan-15	LOAN1001	USGAAP	2	Υ
1-Jan-15	LOAN1002	USGAAP	2	Υ
1-Jan-15	LOAN1000	USGAAP	2	Υ

There may be a requirement to reload a complete snapshot of data in the OFSAA staging again. This could either be to satisfy an intraday reporting requirement or to load corrected source records in the OFSAA staging table. The earlier design forced users to truncate the staging table to accommodate the new set of dates. However, with the introduction of the Load Run identifier concept, you can retain both sets of data in the staging area and allow the downstream application to choose the correct set for processing. This involves making another call to FN\_REGISTER\_LOAD\_RUN function.

For example in the below table, LOAN1001 and LOAN1002 have some changes since the previous load and will now need to be loaded again staging with a different load run identifier. Additionally, the strategy is to load the complete snapshot again to staging, all the records from the source such as both changed and unchanged records will need to stamp with the new load run identifier.

STG\_LOAN\_CONTRACTS after load appears as follows.

Table 13: The STG\_LOAN\_CONTRACTS table after the loading

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	N_EOP_BAL
01-JAN-15	LOAN1000	USGAAP	1	4066.213
01-JAN-15	LOAN1001	USGAAP	1	34538.905
01-JAN-15	LOAN1002	USGAAP	1	667.357
01-JAN-15	LOAN1000	USGAAP	2	4066.213
01-JAN-15	LOAN1001	USGAAP	2	34540.000
01-JAN-15	LOAN1002	USGAAP	2	670.000

REV\_LOAD\_RUN\_MASTER after second function call appears as follows.

Table 14: The REV\_LOAD\_RUN\_MASTER table after the second function call

LOAD_ RUN_ID	MIS_ DATE	LOAD_ TYPE	LOAD_ PURPOSE	START_DT_ TIME	LOAD_RUN_ NAME	BATCH_ID	LOAD_RUN_ STATUS
1	01-JAN-15	В	ВА	01-JAN-15 13:00 PM	OIDF_Load	OFSOIDF INFO_20 150101_1	Complete
2	01-JAN-15	В	ВА	01-JAN-15 23:00 PM	Loan Corrections	OFSOIDF INFO_20 150101_2	In Progress

## **8.4.2** Incremental Snapshot Load Example

This scenario is applicable when source may to portions of data at different point in time, or handover only the records changed since the last load. This is contrary to example explained under the Complete snapshot load section.

The same scenario in case of incremental snapshot load will appear as below.

NOTE

Only the changed source records are stamped with the new load run identifer.

**Table 15: Incremental Snapshot Load example** 

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	N_EOP_BAL
01-JAN-15	LOAN1000	USGAAP	1	4066.213
01-JAN-15	LOAN1001	USGAAP	1	34538.905
01-JAN-15	LOAN1002	USGAAP	1	667.357
01-JAN-15	LOAN1001	USGAAP	2	34540.000
01-JAN-15	LOAN1002	USGAAP	2	670.000

NOTE

After each load you need to run FN\_REGISTER\_LOAD\_DETAILS function mentioned in Post Stage Load Process and Updating Load as Completed which is explained in the following sections

To enable downstream applications to consume only the latest set of record, you need to call another function named fn\_pop\_load\_run\_map. This is mandatory in case of incremental snapshot load scenario. This function populates a intermediate processing table that keep track of latest incoming record identifier.

Function - Populate Load Run Map

Parameters - Batch ID, MIS Date, Stage Table Name, Load Run ID, Load Run Name

Table 16: Populate Load Run Map example

Parameters	Source of Values	Example Values
Batch ID	Auto-generated if you are using OFSAA Framework	OFSOIDFINFO_20150101_1
MIS-Date	Input from Customer	01/01/2015
Stage Table Name	Input from Customer	STG_ANNUITY_CONTRACTS
Load Run ID	Input from Customer	1
Load Run Name,	Input from Customer	OIDF_Load

### Example

```
Declare
Result number;
Begin
Result: =
fn_pop_load_run_map('OFSOIDFINFO_20150101_1','20150101','STG_ANNUITY_CONTRACTS'
,1,'OIDF
LOAD');
END;
```

**NOTE** 

For troubleshooting any errors while making the function calls, refer to fsi\_message\_log table for more details.

For the example mentioned above, records in FSI\_ACCOUNT\_LOAD\_RUN\_MAP table will appear as below:

Table 17: Records in the FSI\_ACCOUNT\_LOAD\_RUN\_MAP table

FIC_MIS_DATE	V_ACCOUNT_NUMBER	V_GAAP_CODE	N_LOAD_RUN_ID	F_LATEST_LOAD_RUN_FL AG
1-Jan-15	LOAN1000	USGAAP	1	Υ
1-Jan-15	LOAN1001	USGAAP	1	N
1-Jan-15	LOAN1002	USGAAP	1	N
1-Jan-15	LOAN1001	USGAAP	2	Υ
1-Jan-15	LOAN1002	USGAAP	2	Υ

## 8.5 Post Stage Load Process

Once you load the OFSAA Stage tables successfully using the load run ID which is generated from Load Run Map function, you need to perform certain post load processes in order to complete the loading.

#### **Topics:**

- Register Load Run Details
- Updating Load as Completed

## 8.5.1 Register Load Run Details

Once you load the OFSAA Stage tables successfully using the load run ID which is generated from Load Run Map function, you need to register the load run details by calling the following function with the load type whether it was incremental or full snap shot.

Function - Register Load Run Details

Parameters - batch ID, mis-date, load run name, load run ID, stage table name, load type

Table 18: Regist	er Load Run	Details Example
------------------	-------------	-----------------

Parameters	Source of Values	Example Values
Batch ID	Auto-generated if you are using OFSAA Framework	OFSOIDFINFO_20150101_1
MIS-Date	Input from Customer	01/01/2015
Stage Table Name	Input from Customer	STG_ANNUITY_CONTRACTS
Load_Run_ld	Input from Customer	1
Load Run Name,	Input from Customer	OIDF_Load
Load Type	Input from Customer	S - Full SnapShot I - Incremental

#### Example:

```
Declare
Result number; Begin
Result: =
fn_register_load_details('OFSOIDFINFO_20150101_1','20150101',
'STG_ANNUITY_CONTRACTS',1,'OIDF_LOAD', 'I');
END:
```

This function populates a table named rev\_load\_run\_details. The columns load type can have only 2 values, such as:

- "S Complete/Full Snapshot
- "I Incremental Snapshot

Table 19: Population of the REV\_LOAD\_RUN\_DETAILS table

LOAD_RUN_ID	MIS_DATE	STAGE_TABLE_NAME	LOAD_TYPE
1	1-Jan-15	STG_LOAN_CONTRACTS	1

## 8.5.2 Updating Load as Completed

Once you complete these steps, update the status of the record inside rev\_load\_run\_master as Completed.

```
UPDATE rev_load_run_master

SET     LOAD_RUN_STATUS = 'Completed' WHERE pMis_Date = '01-Jan-15'

AND     pLoad Run Name = 'OIDF LOAD' and LOAD RUN ID = 1;
```

# 8.6 Loading data into OFSAA Results Tables from Staging Tables

OFSAAI does not support load run versioning for Data Movement from Stage to Results using Batch/Run Framework. The same feature is expected as an enhancement in future release of OFSAAI.

As a work around, currently you can use the following methods to load the results table using different Load Run IDs.

#### **Topics:**

- Complete Snapshot Load Scenario
- Incremental Load Scenario

## 8.6.1 Complete Snapshot Load Scenario

To enable the Data Load into Results table from staging using the Load Run concept in case of Full SnapShot, you can use the following Task Level Parameter in the T2T Filter condition and can pass the load run ID to be passed in Batch Framework or Run Framework.

For example: FCPS T2T for Stage Loan Contracts

- Modify Filter Condition inside T2T:
  - Filter Condition to be used in T2T: The highlighted condition required to be added in T2T

```
Filter: UPPER(STG_ANNUITY_CONTRACTS.v_gaap_code)='USGAAP' AND STG_ANNUITY_CONTRACTS.fic_mis_date=$MISDATE AND STG_ANNUITY_CONTRACTS.N_LOAD_RUN_ID='[LOADRUN]'
```

- Modify the Corresponding Batch Task Each Time with Load Run Idxxx
  - a. Select Batch, Task (T2T\_FCPS\_STG\_ANNUITY\_CONTRACTS)
  - b. Click Edit.
  - c. Add Highlighted Condition in Default Value and Save (Each Time we must provide the Load Run ID. Here in the following example, 1 is used.)

[DRCY]=USD,[LOADRUN]=1

- **d.** Execute the batch after this change. It loads the Result table with the given Load Run ID Records.
- e. Modify the Corresponding Process Task of a Run each time with the Load Run ID.
- f. Select the **Process** and click **Edit**.
- g. Choose Components, select the Object (T2T\_FCPS\_STG\_ANNUITY\_CONTRACTS) and click Components.
- **h.** Click the dropdown button associated with the T2T.
- Add the Highlighted Condition with the following text, and Save DRCY, USD, LOADRUN, 1.
- j. Execute the Run. It loads the Result table with the given Load Run ID records.

## 8.6.2 Incremental Load Scenario

To enable the Data Load into Results table from staging using the Load Run concept in case of incremental load, you can use the following T2T join change concept in the T2T ANSI join and can use the Batch Framework or Run Framework to execute the same.

For example, FCPS T2T for Stage Annuity Contracts:

Modify Join Condition inside T2T:

Join Condition to be added in all relevant T2T

For example, STG\_ANNUITY\_CONTRACTS T2T join

```
INNER JOIN FSI_ACCOUNT_LOAD_RUN_MAP

ON FSI_ACCOUNT_LOAD_RUN_MAP.V_ACCOUNT_NUMBER =

STG_ANNUITY_CONTRACTS.V_ACCOUNT_NUMBER

AND FSI_ACCOUNT_LOAD_RUN_MAP.N_LOAD_RUN_ID =

STG_ANNUITY_CONTRACTS.N_LOAD_RUN_ID AND FSI_ACCOUNT_LOAD_RUN_MAP.FIC_MIS_DATE =

STG_ANNUITY_CONTRACTS.FIC_MIS_DATE AND FSI_ACCOUNT_LOAD_RUN_MAP.V_GAAP_CODE =

STG_ANNUITY_CONTRACTS.V_GAAP_CODE AND

FSI_ACCOUNT_LOAD_RUN_MAP.F_LATEST_LOAD_RUN_FLAG = 'Y'
```

Execute the batch or fire the Run after the above step.

# **9** About Dimension Loading Process

This chapter provides information about Dimension Loading Process in the Oracle insurance data foundation application.

#### **Topics:**

- About SCD Component
- Populating Data in Dimension Table
- Tables Used by the SCD Component
- Loading Dimension Tables
- Supplementary Information for Dimension Loading Process

## 9.1 About SCD Component

A Slowly Changing Dimension (SCD) is a dimension that stores and manages both current and historical data over time in a data warehouse. SCDs are dimensions that have data that changes slowly, rather than changing on a time-based, regular schedule. It is considered and implemented as one of the most critical ETL tasks in tracking the history of dimension records. There are three types of SCDs and you can use Warehouse Builder to define, deploy, and load all three types of SCDs.

## **Topics:**

- Type 1 SCDs Overwriting
- Type 2 SCDs Creating another dimension record
- Type 3 SCDs Creating a current value field

## 9.1.1 Type 1 SCDs - Overwriting

The Type 1 SCD overwrites old data with new data and therefore does not track historical data. This is useful for making changes to dimension data. This is the default type of dimension that is created. You do not need to specify any additional information to create a Type 1 SCD.

In this example, N\_PRODUCT\_SKEY is the surrogate key column which is a unique key for each record in the dimension table. V\_PRODUCT\_NAME is the product name. D\_START\_DATE indicates the date from which this product record is valid.

Table 20: Type 1 SCD methodology example after the execution during a processing period

N_PRODUCT_ SK EY	V_PRODUCT_ NAME	D_START_DATE	D_END_DAT E	F_LATEST_RECORD_ INDICATOR
1	PL	5/31/2010	12/31/9999	Υ

D\_END\_DATE indicates the date till which this product record is valid.

F\_LATEST\_RECORD\_INDICATOR with value **Y**, which indicates that this is the latest record in the dimension table for this product and **N** indicates it is not. If the V\_PRODUCT\_NAME column is set as a Type 1 SCD column and if there is a change in the product name to Personal Loan from PL in the above

example; in the next processing period, when SCD is executed for the new processing period, the record in the above example changes to the following.

Record Change Example:

Table 21: Type 1 SCD methodology example after the execution and record change during a new processing period

N_PRODUCT_S K EY	V_PRODUCT_NAME	D_START_DATE		F_LATEST_RECORD_ INDICATOR
1	Personal Loan	6/30/2010	12/31/9999	Υ

## 9.1.2 Type 2 SCDs - Creating another dimension record

The Type 2 method tracks historical data by creating multiple records for a given natural key in the dimensional tables with separate surrogate keys. With Type 2, the historical changes in dimensional data are preserved.

Therefore, a Type 2 SCD retains the full history of values. When the value of a chosen attribute changes, the current record is closed. A new record is created with the changed data values and this new record becomes the current record. Each record contains the effective time and expiration time to identify the time period between which the record was active.

In the above example for the change in product name from PL to Personal Loan if history has to be preserved, then the V\_PRODUCT\_NAME column has to be set as Type 2 when SCD is processed for the processing period and the change inserts a new record as shown in the following example:

Table 22: Type 2 SCD methodology example after the execution during a processing period

N_PRODUCT_SKE Y	V_PRODUCT_NAME	D_START_DATE	D_END_DATE	F_LATEST_RECORD_INDI CATOR
1	PL	5/31/2010	12/31/9999	N
2	Personal Loan	6/30/2010	12/31/9999	Υ

A new record is inserted to the product dimension table with the new product name. The latest record indicator for this is set as 'Y', indicating this is the latest record for the personal loan product. The same flag for the earlier record was set to 'N'.

## 9.1.3 Type 3 SCDs - Creating a current value field

A Type 3 SCD stores two versions of values for certain selected level attributes. Each record stores the previous value and the current value of the selected attribute.

When the value of any of the selected attributes changes, the current value is stored as the old value and the new value becomes the current value.

For more information on SCDs, see:

- Oracle Data Integrator Best Practices for a Data Warehouse at
  - <a href="http://www.oracle.com/technetwork/middleware/data-integrator/overview/odi-bestpractices-datawarehouse-whi-129686.pdf">http://www.oracle.com/technetwork/middleware/data-integrator/overview/odi-bestpractices-datawarehouse-whi-129686.pdf</a>
- Oracle® Warehouse Builder Data Modeling, ETL, and Data Quality Guide at
  - http://docs.oracle.com/cd/E11882\_01/owb.112/e10935.pdf

#### Additional online sources include:

- http://en.wikipedia.org/wiki/Slowly\_changing\_dimension
- http://www.oracle.com/webfolder/technetwork/tutorials/obe/db/10g/r2/owb/owb10gr2\_gs/owb/lesson3/slowlychangingdimensions.htm

An excellent published resource that covers SCD in detail is "The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling" by Ralph Kimball and Margy Ross.

The SCDs used in Data Foundation solutions are listed in the OIDF SCD Technical Metadata file of this release.

## 9.2 Populating Data in Dimension Table

## **Topics:**

Prerequisites

Data Foundation solutions use the SCD component to handle dimensional data changes. For more details about the SCD component and SCD process, see the <u>Slowly Changing Dimension (SCD) Process</u> and the <u>Execute the SCD Batch</u> sections respectively.

## 9.2.1 Prerequisites

- The SCD executable should be present under <installation home>ficdb/bin. The file name is scd.
- The user executing the SCD component should have execute rights on the file mentioned as prerequisite in point 2.
- The setup tables accessed by SCD component are SYS\_TBL\_MASTER and SYS\_STG\_JOIN\_MASTER.

SYS\_TBL\_MASTER stores the information like which is the source stage table and the target dimension tables. The source sometimes can be the database views which could be simple or a complex view.

SYS\_STG\_JOIN\_MASTER stores the information like which source column is mapped to which column of a target dimension table. It makes use of data base sequence to populate into surrogate key columns of dimension tables.

# 9.3 Tables Used by the SCD Component

The database tables used by the SCD component are as follows:

- SYS\_TBL\_MASTER
- SYS\_STG\_JOIN\_MASTER
- DIM\_<dimensionname>\_V

#### About SYS\_TBL\_MASTER Table 9.3.1

The solution installer populates one row per dimension for the seeded dimensions in the SYS\_TBL\_MASTER table.

Table 23: Rows populated for the seeded dimensions in the SYS\_TBL\_MASTER table

Column Name	Data Type	Column Description
MAP_REF_NUM	NUMBER(3) NOT NULL	The Mapping Reference Number for this unique mapping of a Source to a Dimension Table.
TBL_NM	VARCHAR2(30) NOT NULL	Dimension Table Name
STG_TBL_NM	VARCHAR2(30) NOT NULL	Staging Table Name
SRC_PRTY	SRC_PRTY NUMBER(2) NULL	Priority of the Source when multiple sources are mapped to the same target.
SRC_PROC_SEQ	NUMBER(2) NOT NULL	The sequence in which the various sources for the DIMENSION will be taken up for processing.
SRC_TYP	VARCHAR2(30) NULL	The type of the Source for a Dimension, that is, Transaction Or Master Source.
DT_OFFSET	NUMBER(2) NULL	The offset for calculating the Start Date based on the Functional Requirements Document (FRD).
SRC_KEY	NUMBER(3) NULL	

Sample Data: This is the row put in by the solution installer for the Line of Business dimension.

Table 24: Sample data in the rows populated for the Line of Business dimension in the SYS\_TBL\_MASTER table

Parameter	Value
MAP_REF_NUM	6
TBL_NM	DIM_LOB
STG_TBL_NM	STG_LOB_MASTER
SRC_PRTY	
SRC_PROC_SEQ	23
SRC_TYP	MASTER
DT_OFFSET	0
SRC_KEY	

NOTE

For any new dimension added, a row will have to be inserted to this table manually.

### 9.3.2 About SYS\_STG\_JOIN\_MASTER Table

The solution installer will populate this table for the seeded dimensions. Table for Seeded Dimension:

Table 25: Rows populated for the seeded dimensions in the SYS\_STG\_JOIN\_MASTER table

Column Name	Data Type	Column Description
MAP_REF_NUM	NUMBER(3) NOT NULL	The Mapping Reference Number for this unique mapping of a Source to a Dimension Table.
COL_NM	VARCHAR2(30) NOT NULL	Name of the column in the Dimension Table.
COL_TYP	VARCHAR2(30) NOT NULL	Type of column. The possible values are given in the following paragraph.
STG_COL_NM	VARCHAR2(60) NULL	Name of the column in the Staging Table.
SCD_TYP_ID	NUMBER(3) NULL	SCD type for the column.
PRTY_LOOKUP_ REQD_FLG	CHAR(1) NULL	Column to determine whether Lookup is required for Priority of Source against the Source Key Column or not.
COL_DATATYPE	VARCHAR2(15) NULL	The list of possible values is VARCHAR, DATE, NUMBER based on the underlying column data type.
COL_FORMAT	VARCHAR2(15) NULL	Column format.

The possible values for column type (the COL\_TYPE column) in SYS\_STG\_JOIN\_MASTER are:

- PK Primary Dimension Value (may be multiple for a given "Mapping Reference Number")
- SK Surrogate Key
- DA Dimensional Attribute (may be multiple for a given "Mapping Reference Number")
- SD Start Date
- ED End Date
- LRI Latest Record Indicator (Current Flag)
- CSK Current Surrogate Key
- PSK Previous Surrogate Key
- SS Source Key

- LUD Last Updated Date / Time
- LUB Last Updated By
- NN Not Null

Sample Data: This is the row put in by the solution installer for the Line of Business dimension.

Sample Data:

Table 26: Sample data in the rows populated for the Line of Business dimension in the SYS\_STG\_JOIN\_MASTER table

Parameter	Value
MAP_REF_NUM	6
COL_NM	V_LOB_CODE
COL_TYP	PK
STG_COL_NM	V_LOB_CODE
SCD_TYP_ID	
PRTY_LOOKUP_REQD_FLG	N
COL_DATATYPE	VARCHAR
COL_FORMAT	61

NOTE

For any new dimension added, the column details will have to be inserted to this table manually.

### 9.3.3 About DIM\_<dimensionname>\_V Table

The database view which SCD uses as the source.

Example:

DIM\_BANDS\_V

These views come as part of the install for the dimensions seeded with the application.

**NOTE** 

For any new dimension added, a view will have to be created similar to DIM\_BANDS\_V.

DIM\_<dimensionname>: Output table to which SCD writes the dimension data. A sequence must be added for every user-defined dimension.

#### Example:

increment by 1

### 9.4 Loading Dimension Tables

Load data into the Dimension tables using one of the following suitable processes.

#### **Topics:**

- Seeded Data
- Loading Policy Tables through Insurance SCD
- Loading Dimension Tables through Data Foundation SCD
- Loading Key Dimensions using AMHM and Hierarchy Flattening
- Loading Data from STG\_INTF Tables to DIM\_INTF Tables
- Executing the Loading Procedure using Batch Framework
- Executing the Hierarchy Flattening Procedure using Batch Framework
- Checking the SCD Batch Execution Status

#### 9.4.1 Seeded Data

This is an automatic process wherein the Seeded data for Dimensions, which are packaged within the installer, are populated during the installation.

**NOTE** 

To access the Seeded data for Dimensions, see the latest version of the <u>Oracle Insurance Data Foundation Application Pack Run Chart</u>.

### 9.4.2 Loading Policy Tables through Insurance SCD

To execute Policy Dimension SCD batch <INFODOM>\_INSURANCE\_SCD, see <u>Execute the SCD Batch of the DIM POLICY table</u>.

### 9.4.3 Loading Dimension Tables through Data Foundation SCD

To execute an SCD batch <INFODOM>\_DATA\_FOUNDATION\_SCD for any other Dimension table, see <a href="Execute the <INFODOM>\_DATA\_FOUNDATION\_SCD">Execute the <INFODOM>\_DATA\_FOUNDATION\_SCD</a> batch for the required Dimension table.

**NOTE** 

For more comprehensive coverage of configuration and execution of a batch, see <u>Oracle Financial Services Advanced Analytical Applications</u> <u>Infrastructure User Guide Release 8.1.1.0.0</u>.

### 9.4.4 Loading Key Dimensions using AMHM and Hierarchy Flattening

The Dimension Loader functionality in the Data Foundation application enables you to load Dimension tables such as DIM\_ORG\_UNIT, DIM\_GL\_ACCOUNT, DIM\_COMMON\_COA, DIM\_PRODUCT, and DIM\_ORG\_STRUCTURE.

For more information about loading the Dimensions using AMHM, see the *Dimension Management* section in <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u> and *Dimension Load Procedure* section in the <u>Oracle Financial Services Analytical Applications</u> Data Model Utilities User <u>Guide</u>.

### 9.4.5 Loading Data from STG\_INTF Tables to DIM\_INTF Tables

The following tables are a part of the Staging. The Dimension data is stored in the following set of tables.

Table 27: Details of loading data from the STG\_INTF tables to the DIM\_INTF tables

Item	Description
STG _ <dimension>_B_INTF</dimension>	Stores leaf and node member codes within the dimension.
STG_ <dimension>_TL_INTF</dimension>	Stores names of leaf and node and their translations.
STG_ <dimension>_ATTR_INTF</dimension>	Stores attribute values for the attributes of the dimension.
STG_ <dimension>_HIER_INTF</dimension>	Stores parent-child relationships of members and nodes that are part of hierarchies.
STG_HIERARCHIES_INTF	Stores master information related to hierarchies. Data present in the above set of staging dimension tables are loaded into the below set of dimension tables.
DIM_ <dimension>_B</dimension>	Stores leaf and node member codes within the dimension.
DIM_ <dimension>_TL</dimension>	Stores names of leaf and node and their translations.
DIM_ <dimension>_ATTR</dimension>	Stores attribute values for the attributes of the dimension.
DIM_ <dimension>_HIER</dimension>	Stores parent-child relationships of members and nodes that are part of hierarchies.
REV_HIERARCHIES	Stores hierarchy related information.
REV_HIERARCHY_LEVELS	Stores levels of the hierarchy.

For more information about viewing the structure of staging tables, see the <u>Oracle Financial Services</u> <u>Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x.</u>

Staging tables are present for all key dimensions that are configured within the OFSAAI framework. The Dimension IDs used for key dimensions are as follows.

Table 28: The Dimension IDs used for the key Dimensions

Dimension ID	Dimension Table	Staging Tables
1	DIM_ORG_UNIT	STG_ORG_UNIT_**_INTF

Dimension ID	Dimension Table	Staging Tables
2	DIM_GL_ACCOUNT	STG_GL_**_INTF
3	DIM_COMMON_COA	STG_COMMON_COA_**_INTF
4	DIM_PRODUCT	STG_PRODUCTS_**_INTF
5	DIM_ORG_STRUC- TURE	STG_LEGAL_ENTITY_**_INTF

### 9.4.6 Executing the Loading Procedure using Batch Framework

The batch for Key Dimension Loader can be executed by executing the task (Task for Loading Data from DRM) present in the seeded batch <infodom>\_DATA\_FOUNDATION\_SCD.

Below are the input parameters:

- pDIMENSIONID: This is the dimension ID.
- pSynchFlag: This parameter is used to identify if a complete synchronization of data between staging and fusion table is required. The default value is 'Y'.

For more information, see the *Dimension Loaders* section in the *Data Loaders* section in the <u>Oracle Financial Services Analytical Applications Data Model Utilities User Guide</u>.

# 9.4.7 Executing The Hierarchy Flattening Procedure using Batch Framework

The batch for Dimension Hierarchy flattening can be executed by executing the task (DT for DRM Dimension Hierarchy Flattening) present in the seeded batch <infodom>\_DATA\_FOUNDATION\_SCD.

Below are the input parameters:

- pDIMENSIONID: This is the dimension ID.
- pHierarchyld: Enter the Hierarchy ID. If all the hierarchies belonging to a dimension are to be processed, then provide NULL as the parameter value. Else, provide the System Identifier of the hierarchy that must be transformed.

For more details, see the *Hierarchy Transformation* section in the *Data Loaders* section the <u>Oracle Financial Services Analytical Applications Data Model Utilities User Guide</u>.

### 9.4.8 Checking the SCD Batch Execution Status

To check the SCD batch execution status, see Verify Log Files and Check Error Messages if any.

# 9.5 Supplementary Information for Dimension Loading Process

The following are the supplementary information required for the Dimension loading process.

#### **Topics:**

Improving SCD Performance

- Handling Multiple GAAP Codes for the Same Account Number for the Same MIS Date in SCD
- Handling Multiple GAAP Codes for the Same Account Number for the Same MIS Date in the Function

### 9.5.1 Improving SCD Performance

SCD performance can be improved by providing hints and session alter statements. This requires the presence of the following four columns in SYS\_TBL\_MASTER:

- merge\_hint
- select\_hint
- session\_enable\_statement
- session\_disable\_statement

These columns are present in the OFSAAI versions 7.3.2.4.0 and above. If these have to be used in OFSAAI versions 7.3.2.2.0 or 7.3.2.3.0, execute the following SQL queries:

```
ALTER TABLE SYS_TBL_MASTER ADD MERGE_HINT VARCHAR2(255)

ALTER TABLE SYS_TBL_MASTER ADD SELECT_HINT VARCHAR2(255)

ALTER TABLE SYS_TBL_MASTER ADD SESSION_ENABLE_STATEMENT VARCHAR2(255)

ALTER TABLE SYS_TBL_MASTER ADD SESSION_DISABLE_STATEMENT VARCHAR2(255)

/
```

During the upgrade to OFSAAI 7.3.2.4.0, ensure to backup SYS\_TBL\_MASTER table and to drop the preceding four columns, if these scripts are executed in any of the OFSAAI versions prior to 7.3.2.4.0. Otherwise, an upgrade to OFSAAI 7.3.2.4.0 may throw an error, since the columns exist.

For improving performance, hints for the MERGE query, which is generated internally by the SCD, can be provided under MERGE\_HINT. The following session alters can be mentioned in the SESSION\_ENABLE\_STATEMENT and SESSION\_DISABLE\_STATEMENT columns.

- 1. SESSION\_ENABLE\_STATEMENTs are executed before the MERGE in the SCD and SESSION\_DISABLE\_STATEMENTs are executed after the SCD MERGE.
- 2. Since all the tasks under the SCD batch for DIM\_ACCOUNT works on the same target, the SESSION\_DISABLE\_STATEMENTs in SYS\_TBL\_MASTER cannot be provided when tasks are executed. In this case, there can be a separate SQL file to contain all the SESSION\_DISABLE\_STATEMENTs to be executed once after all the tasks in the SCD are done. The SESSION\_DISABLE\_STATEMENT will hold a null in the SYS\_TBL\_MASTER table.
- **3.** SESSION\_ENABLE\_STATEMENTs are required to be mentioned only for the first task in the batch. Here the target is the same for all the tasks under a batch. In case any of the tasks are to be executed separately, then the SESSION\_ENABLE\_STATEMENTs should be mentioned for any one of the tasks which is included in the batch for the execution.

```
Example
```

```
MERGE_HINT and SESSION_ENABLE_STATEMENT in SYS_TBL_MASTER
```

Table Name	Stage Table Name	Merge Hint	Session Enable Statement
DIM_ACCOUNT	STG_LOAN_CONTRACTS_V	/*+parallel	"alter session enable
		(DIM_ACCOUNT,10) */	parallel dml query", "alter table DIM_ACCOUNT
			nologging parallel 10"

Table 29: Merge Hint and Session Enable Statement details

- **4.** Execute all the tasks in parallel. This may cause N\_RCV\_LEG\_ACCT\_SKEY to have an incremental value as compared to N\_ACCT\_SKEY.
- **5.** Execute the SQL file with all the SESSION\_DISABLE\_STATEMENTs, after the successful completion of the SCD batch.
- **6.** After the DIM\_ACCOUNT table is populated using this approach, you cannot use the initial approach (FN\_POPDIMACCOUNT) as this will lead to SKey conflict.
- 7. Ensure that you have set the value of the sequence SEQ\_DIM\_ACCOUNT\_SCD as max (value of SKey in DIM\_ACCOUNT) +1, before moving from old to a new approach.
- **8.** The F\_LATEST\_RECORD\_INDICATOR for an existing DIM\_ACCOUNT data already loaded by the function must be updated to 'Y' before running the SCD, failing which a new SKey may get generated for the same account number.
- **9.** SCD execution occurs based on the GAAP code, which is configured in the SETUP\_MASTER table. These are introduced to tackle the scenario of multiple GAAP codes. Whether or not there exist multiple GAAP codes, SETUP\_MASTER must be manually configured as follows:

Table 30: Sample of the GAAP code to configure the SETUP\_MASTER table

V_COMPONENT_CODE	V_COMPONENT_DESC	V_COMPONENT_VALUE
DEFAULT_GAAP	DEFAULT_GAAP	USGAAP

Where V\_COMPONENT\_VALUE must be manually populated with the required GAAP code. For all other GAAP codes, ensure to update SETUP\_MASTER manually before running DIM\_ACCOUNT SCD.

# 9.5.2 Handling Multiple GAAP Codes for the Same Account Number for the Same MIS Date in SCD

NOTE

For illustration, Account Dimension is considered.

When multiple GAAP codes exist for the same account number for the same MIS date, configure the SETUP\_MASTER table manually as mentioned in the preceding section:

V\_COMPONENT\_VALUE will hold the GAAP code for which the SCD must be executed.

• If there are different GAAP codes for two distinct account numbers for the same MIS date, then the SCD has to be executed for each GAAP code by changing the V\_COMPONENT\_VALUE manually in SETUP\_MASTER table. The SETUP\_MASTER table should have only one record WHERE V\_COMPONENT\_DESC = 'DEFAULT\_GAAP'.

# 9.5.3 Handling Multiple GAAP Codes for the Same Account Number for the Same MIS Date in the Function

**NOTE** 

For illustration, Account Dimension is considered.

For the FN\_POPDIMACCOUNT function, you have to create views and use these views instead of the tables in the FSI\_DIM\_ACCOUNT\_SETUP\_DETAILS table. For Product Processors having GAAP code as part of the Primary Key, create a view on the table with a filter on the GAAP code as:

- where V\_GAAP\_CODE = (SELECT V\_COMPONENT\_VALUE FROM SETUP\_MASTER WHERE V\_COMPONENT\_DESC = 'DEFAULT\_GAAP')
- Use this view under TABLE\_NAME in the FSI\_DIM\_ACCOUNT\_SETUP\_DETAILS table. If there are
  different GAAP codes for two distinct account numbers for the same MIS date, then the function
  has to be executed for each GAAP code by changing the V\_COMPONENT\_VALUE manually in
  SETUP\_MASTER table. The SETUP\_MASTER table should have only one record WHERE
  V\_COMPONENT\_DESC ='DEFAULT\_GAAP'.

#### **NOTE**

If STG\_OPTION\_CONTRACTS is loaded for two MIS dates, and FN\_POPDIMACCOUNT is executed, then all records irrespective of the MIS date will get loaded. To resolve this, remove the expression under SQL\_TEXT in

FSI\_DIM\_ACCOUNT\_SETUP\_DETAILS for STG\_OPTION\_CONTRACTS and use the same expression to create a view and use this view as the TABLE\_NAME in FSI\_DIM\_ACCOUNT\_SETUP\_DETAILS.

## 10 Account Dimension Table

This section provides information about the Account Dimension loading process in the Data Foundation application.

#### **Topics:**

- About Account Dimension Table
- About SCD Process for Populating Account Dimension Table
- <u>Deploying Account Dimension Table on Hive</u>
- Populating Account Dimension Table

The account is where an insurer deposits premium from policies it underwrites and from which that Insurance Company funds day-to-day operations of the business.

#### 10.1 About Account Dimension Table

The mapping details for the Account Dimension (DIM\_ACCOUNT) tables are given here.

Table 31: The Account Dimension table mapping details

Map Reference Number	Source View Name	Logical Source View Name
190	STG_BORROWINGS_V	Stage Borrowings View
193	STG_COMMITMENT_CONTRACTS_V	Stage Commitment Contracts View
194	STG_CREDIT_DERIVATIVES_V	Stage Credit Derivatives View
195	STG_FUTURES_V	Stage Futures View
196	STG_FX_CONTRACTS_V	Stage Foreign Exchange Contracts View
197	STG_GUARANTEES_V	Stage Guarantees View
198	STG_INVESTMENTS_V	Stage Investments View
199	STG_LC_CONTRACTS_V	Stage Loan Contracts View
201	STG_LOAN_CONTRACTS_V	Stage Loan Contracts View
202	STG_MM_CONTRACTS_V	Stage Money Market Contracts View
203	STG_MUTUAL_FUNDS_V	Stage Mutual Funds View
205	STG_OPTION_CONTRACTS_V	Stage Option Contracts View
206	STG_REPO_CONTRACTS_V	Stage Repurchase Contracts View
208	STG_SWAPS_CONTRACTS_V	Stage Swaps Contracts View
210	STG_TRUSTS_V	Stage Trusts View
262	STG_BORROWING_COMMITMENTS_V	Stage Borrowing Commitments View
263	STG_CORRESPONDENT_ACCOUNT_V	Stage Correspondent Account View
264	STG_TRADING_ACCOUNT_V	Stage Trading Account View
349	STG_COMMODITIES_V	Stage Commodities View
350	STG_CUSTODIAL_ACCOUNTS_V	Stage Custodial Accounts View
351	STG_MANAGED_INV_ADV_V	Stage Managed Investment Account View
352	STG_MERCHANT_BANKING_V	Stage Merchant Banking View

Map Reference Number	Source View Name	Logical Source View Name
353	STG_PREPAID_CARDS_V	Stage Prepaid Cards View
354	STG_SPEND_OBLIGATIONS_V	Stage Spend Obligations View
341	STG_PAYMENT_SETTLEMENT_ACCT_V	Stage Payment Settlement Account View
400	STG_MERCHANT_CARDS_V	Stage Merchant Cards View
465	STG_FORWARDS_V	Stage Forwards View
467	STG_ASSETS_SOLD_V	Stage Assets Sold View
494	STG_CREDIT_PARTCPN_DETAILS_V	Stage Credit Participation Details View
670	STG_DEP_BRRWNG_PARTCPN_DTLS_V	Stage Dep Borrowing Participation Details View

All the above-mentioned Product Processor tables are mutually exclusive in terms of functionality. Therefore, V\_ACCOUNT\_NUMBER or V\_CONTRACT\_CODE (Primary Key of each Product Processor) must also have mutually exclusive values across all the tables. The same account number cannot be part of multiple Product Processor tables.

# 10.2 About SCD Process for Populating Account Dimension Table

The SCD population in the DIM\_ACCOUNT table generates individual numeric Surrogate Keys for every account number with an additional leg SKey. Below are the columns that are loaded during SCD population:

- V ACCOUNT NUMBER
- N\_ACCT\_SKEY
- N\_RCV\_LEG\_ACCT\_SKEY
- FIC\_MIS\_DATE

This approach replaces the function load in which the table DIM\_ACCOUNT is getting loaded through the function, FN\_POPDIMACCOUNT. This loads the above-mentioned columns into the DIM\_ACCOUNT table. Here, the sources are the different product processor tables present in the solution, which are configured in the FSI\_DIM\_ACCOUNT\_SETUP\_DETAILS table.

#### **Topics:**

About <INFODOM>\_DIM\_ACCOUNT\_SCD Batch

### 10.2.1 About <INFODOM>\_DIM\_ACCOUNT\_SCD Batch

Batch <INFODOM>\_DIM\_ACCOUNT\_SCD is introduced with multiple tasks under it.

These tasks represent their corresponding SCD processes where different product processors are the source and DIM\_ACCOUNT is the target. The MAP\_REF\_NUMs mentioned in the following table are introduced into the SYS\_TBL\_MASTER table, and subsequently into SYS\_STG\_JOIN\_MASTER.

Depending on the requirement by an application, a task can be excluded or included from the batch execution.

# 10.3 Deploying Account Dimension Table on Hive

All RDBMS related Account Dimension table can also be deployed on Hive (Stage and Results on Hive).

## 10.4 Populating Account Dimension Table

To populate data into the Account Dimension table through the SCD process, see <u>Execute the SCD Batch of the DIM\_ACCOUNT table</u>.

**NOTE** 

You can also follow this SCD process to populate data into any Hive related Account Dimension table.

For supplementary information about populating data in the Dimension table, see the <u>Supplementary Information for Dimension Loading Process</u> section.

## 11 Policy Dimension Table

This section provides information about Policy Dimension and its loading process in the Oracle Insurance Data Foundation application.

#### **Topics:**

- About Policy Dimension Table
- About SCD Process for Populating Policy Dimension Table
- Deploying Policy Table on Hive
- Populating Policy Dimension Table

The policy is the legal document issued by an Insurance Company (Insurer) to a policyholder (Insured) which states the terms and conditions of the insurance coverage.

The policy dimension table stores list of all policies issued by the insurer.

### 11.1 About Policy Dimension Table

The mapping details for the Policy Dimension (DIM\_POLICY) tables are given here.

Table 32: The Policy Dimension table mapping details

Map Reference Number	Source Table Name	Logical Stage Table Name
224	STG_PROP_CASUALTY_CONTRACTS_V	Stage Property Casualty Contracts View
401	STG_LIFE_INS_CONTRACTS_V	Stage Life Insurance Contracts View
402	STG_HEALTH_INS_CONTRACTS_V	Stage Health Insurance Contracts View
403	STG_ANNUITY_CONTRACTS_V	Stage Annuity Contracts View
634	STG_RETIREMENT_ACCOUNTS_V	Stage Retirement Accounts View
674	STG_REINSURANCE_CNTRCTS_ISSUED	Stage Reinsurance Contracts Issued
675	STG_REINSURANCE_CONTRACTS_HELD	Stage Reinsurance Contracts Held

## 11.2 About SCD Process for Populating Policy Dimension Table

The SCD process for the DIM\_POLICY table generates individual numeric Surrogate Keys for every policy code. These columns are loaded during SCD process:

- V\_POLICY\_CODE
- N\_POLICY\_SKEY
- FIC\_MIS\_DATE
- V\_PRODUCT\_PROCESSOR\_NAME
- V\_PROD\_CODE
- V\_ENTITY\_CODE

This approach replaces the function load in which the table DIM\_POLICY is getting loaded through the function, FN\_POPDIMPOLICY. This loads the above-mentioned columns into the DIM\_POLICY table. Here, the sources are the different product processor tables present in the solution, which are configured in the FSI\_DIM\_POLICY\_SETUP\_DETAILS table.

#### Topic:

About <INFODOM>\_INSURANCE\_SCD Batch

#### 11.2.1 About <INFODOM>\_INSURANCE\_SCD Batch

Batch <INFODOM>\_INSURANCE\_SCD has been introduced with 30 tasks under it.

These tasks represent the corresponding SCD processes where different product processors are the source and DIM\_POLICY is the target. MAP\_REF\_NUMs 224, 401, 402, and 403 are introduced into the SYS\_TBL\_MASTER table, and subsequently into SYS\_STG\_JOIN\_MASTER.

Depending on the requirement by an application, a task can be excluded or included from the batch execution.

### 11.3 Deploying Policy Dimension Table on Hive

All RDBMS related Policy Dimension table can also be deployed on Hive (Stage and Results on Hive).

## 11.4 Populating Policy Dimension Table

To populate data into the Policy Dimension table through the SCD process, see <a href="Execute the SCD Batch of the DIM\_POLICY table">Execute the SCD Batch of the DIM\_POLICY table</a>.

**NOTE** 

You can also follow this SCD process to populate data into any Hive related Policy Dimension table.

For supplementary information about populating data in the Dimension table, see the <u>Supplementary Information for Dimension Loading Process</u> section.

## 12 Executing OIDF Processes through Process Modelling Framework

Process Modelling Framework (PMF) is a process design and execution framework in OFSAA that facilitates the implementation of process sequences or pipelines. Use the framework to orchestrate Run Pipelines and Business Pipelines, alongside the objects that are a part of these pipelines.

This section provides information about the usage of the Process Modeling Framework (PMF) feature in executing the OIDF processes.

NOTE

For detailed information about the Process Modeling Framework (PMF) feature in OFSAA, see the <u>Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0</u>.

#### **Topics:**

- Overview
- Process Modeling Framework Roles
- Access the Process Modeling Framework in OIDF
- Use the Process Modelling Framework for OIDF Functions

### 12.1 Overview

In OIDF Rule Run Framework (RRF), PMF is used to create a Run definition in a Run process. The visual representation of the Run is enabled through PMF by the construction of a Run Pipeline (process). The set of tasks required to carry out the OIDF functions is managed through PMF. Through the PMF, you can execute the following out-of-the-box Run processes for data loading:

- Oracle Insurance Data Foundation Source Run
- Oracle Insurance Data Foundation Execution Run

### 12.2 Process Modeling Framework Roles

Before you access PMF for the management of OIDF tasks, ensure to provide specific users with security or access rights. To grant access to the PMF functionality, assign the following PMF Roles to the user.

See the <u>Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework</u> Orchestration Guide Release 8.1.1.0.0 for details.

Table 33: PMF User Role Codes and Role Names

Role Code	Role Name
WFMWRITE	Manage Workflow Monitor
WFADMINACC	Process Admin User

Role Code	Role Name
WFDELACC	Process Delegation User
WFACC	Workflow Access
WFADV	Workflow Advanced
WFAUTH	Workflow Authorize
WFDELGADM	Workflow Delegation Admin
WFMACC	Workflow Monitor Access
WFREAD	Workflow Read
WFWRITE	Workflow Write

### 12.3 Access the Process Modelling Framework in OIDF

To access the PMF, follow these steps:

- 1. Log in to the OIDF application and click **Administration**
- 2. In the **Information Domain** list, select the information domain required for OIDF. Then click the **Process Modelling Framework** tile.

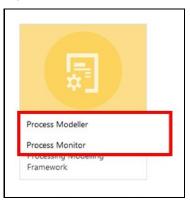
ORACLE\* Financial Services Analytical Applications Infrastructure US-English ▼ OIDFTEST ▼ & ADMINISTRATION Select Infodom Information Domai OIDFINFO System Configuration **Identity Management Database Details** Create New Application Information Domain **Translation Tools** Configuration of various OFSAA services Framework to manage fine grained user authentication and authorization security using access management constructs like passwords, user roles and functions **Object Administration** Utilities Processing Modelling Framework object access management Framework

Figure 50: Select Process Modelling Framework Tile in the Administration Page

- **3.** A submenu is displayed with the following menu items:
  - To access the Process Modeller, click Process Modeller.
  - To monitor currently running processes, click Process Monitor.

To delegate the Run process, click **Delegation**.

Figure 51: Select the Process Modeller or Process Monitor option in PMF submenu



#### **Use the Process Modelling Framework for OIDF 12.4 Functions**

You can use PMF in one of the following ways to perform OIDF functions or tasks:

- **Use Standard OIDF Run Pipelines**
- Configure and Manage Custom Pipelines for OIDF Functions

**ATTENTION** 

Ensure you have executed all the Runs and Batch IDs mentioned in the latest RUN\_CHART\_SUMMARY sheet of the Oracle Insurance Data Foundation Application Pack Run Chart to access the out-of-the-box Run pipelines mentioned in the <u>Use Standard OIDF Run Pipelines</u> section.

Use the following Process Modelling Framework features to perform the OIDF functions either by using the standard pipelines (processes) or by creating custom pipelines:

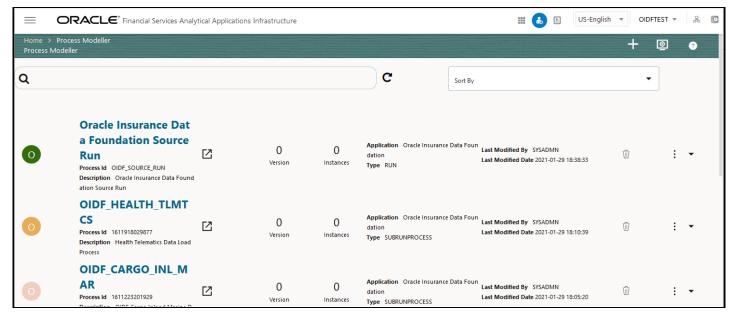
- **Process Modeller**
- **Process Monitor**

### 12.4.1 Process Modeller

The Process Modeller is used to create and modify types of Pipelines, test the Process Flow, and execute the Run.

This is a sample Process Modeller page in PMF.

Figure 52: Sample Process Modeller page

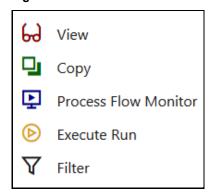


The Process Modeller page displays the existing Business Process Pipelines and Run Pipelines with the details such as Process ID, Process Name, Process Description, Version, Instance, Application, and Last Modified.

You can perform the following tasks from the Process Modeller window:

- Click to create a new Pipeline.
- Click the Process Name link to launch and edit the Process Flow.
- Click to delete a Pipeline.
- Click to view the following menu:

Figure 53: Process Modeller Menu



- Click View to see the process flow.
- Click **Copy** to create a new Pipeline with the same process flow.
- Click Process Flow Monitor to monitor the Pipeline.
- Click **Execute Run** to execute a Run Pipeline.
- Click Filter to apply a filter condition to a Run Pipeline.

**NOTE** The export process is performed using the Object Migration feature.

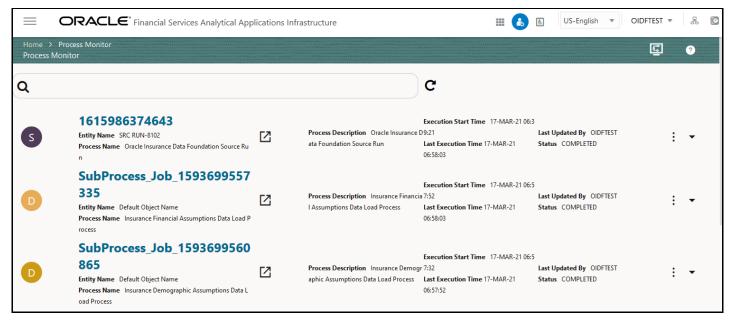
- Use the Search grid to search for a specific Pipeline by providing a keyword from the Process ID,
   Process Name, or Process Description and then click Search C. Click Reset to reset the Search fields.
- You can sort the Pipelines based on Process ID, Process Name, or Application. Click the Sort by drop-down and select the required attribute to sort.
- You can use the **Filter Pipeline** field to filter pipelines based on the pipeline type. For example, to view only the Run Pipelines, remove Process from the Filter Pipeline field.
- Click to launch Process in a new window.
- Click to launch the <u>Process Monitor</u> page.

### 12.4.2 Process Monitor

The Process Monitor is used to supervise the current stage of the process for different instances. After integration with an application, you can invoke the workflow. After invoking, the workflow goes through all the stages defined. The Process Monitor displays all the completed stages, current stage, and future stages. Your user group must be mapped to the function role Workflow Monitor Access (WFMACC) to access the Process Monitor page. For the list of the PMF Roles, see the <a href="Process Modeling Framework Roles">Process Modeling Framework Roles</a> section.

This is a sample Process Monitor page in PMF.

Figure 54: Sample Process Monitor Page



This page displays all the workflows, which are invoked from the application with details such as Entity Name, Process Name, Process Description, Execution Start Time, Last Execution Time, Last Updated By, and Status.

You can perform the following tasks on the **Process Monitor** page:

Click to view the following submenu:

Figure 55: Process Monitor with Re Run, Abort, and Resume options



- Abort: To abort an ongoing Run Pipeline process.
- Resume: To resume a Run Pipeline process.
- Re Run: To execute a Run Pipeline process again irrespective of the previous execution status.
- Use the **Search** grid to search for a specific Pipeline by providing a keyword from the Job ID,
   Process Name, or Process Description, and then click **Search** 
   Click **Reset** to reset the Search fields.
- You can sort the Pipelines based on Job ID, Process Name, or Application. Click the **Sort by** list and select the required attribute to sort.
- You can use the Filter Pipeline field to filter pipelines based on the pipeline type. For example, to view only the Run Pipelines, remove Process from the Filter Pipeline field.
- Click to launch Process in a new window.

• Click to open the <u>Process Modeller</u> page.

### 12.4.3 Use Standard OIDF Run Pipelines

After OIDF is installed successfully, the following out-of-the-box standard Run pipelines (PMF processes) are available in the PMF:

- Oracle Insurance Data Foundation Source Run: This Run pipeline (Process) loads all non-Run enabled tables in OIDF.
- Oracle Insurance Data Foundation Execution Run: This Run pipeline (Process) loads all Run enabled tables in OIDF.

To load all **non-Run** enabled tables in OIDF using the out-of-the-box Oracle Insurance Data Foundation Source Run process, or to load all **Run** enabled tables in OIDF using the out-of-the-box Oracle Insurance Data Foundation Execution Run process, perform the steps in the following section:

Table to Table (T2T) Loading Process

### 12.4.4 Configure and Manage Custom Pipelines for OIDF Functions

This section provides information about configuring and managing the custom pipelines (processes) for OIDF functions.

NOTE

Ensure you have completed the required settings mentioned in the following section:

• Prerequisites for loading T2T

In this section, to create and execute a custom Run pipeline (process) for OIDF in PMF using Fact Common Policy Summary T2T for illustration, follow these steps:

- Create a Run Pipeline
- Create a Process Flow for a Run Pipeline
- Select the Run Parameters and Execute the Run
- Abort, Resume, or Rerun the Process
- Verify the Run Execution

The Insurance Liability Contracts Data Load Process is created and executed in this section for Fact Common Policy Summary T2T. The visual representation of the preceding steps is depicted in the following illustration.

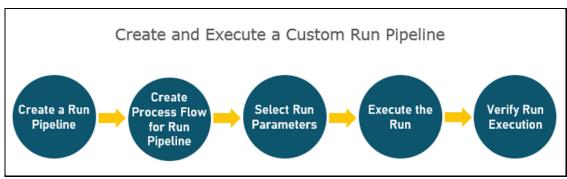


Figure 56: Create and Execute a Custom Run Pipeline

NOTE

Use a Business Pipeline to design a Business Process, which consists of a sequence of internal or external tasks through well-defined interfaces. Using the designer, you can design the entire business flows consisting of several types of tasks or another business pipeline.

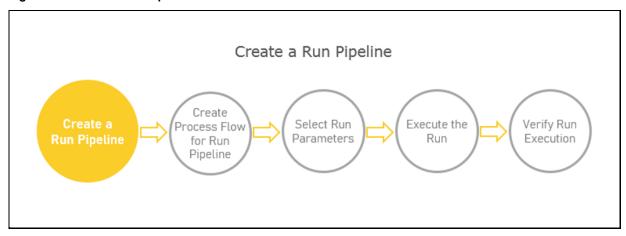
For information about designing a Business Pipeline, see the *Orchestration* of a Business Pipeline section in the Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0

To use a standard out-of-the-box Run pipeline for OIDF, see the Use Standard OIDF Run Pipelines section.

#### **Create a Run Pipeline** 12.4.4.1

Visual representation of the Run is enabled through PMF by the construction of a Run pipeline. Several OFSAA widgets that enable the construction of Run pipeline are available in the Component toolbar. For detailed information about the Components in PMF, see the Components for Designing Your Process Flow section in the Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0.

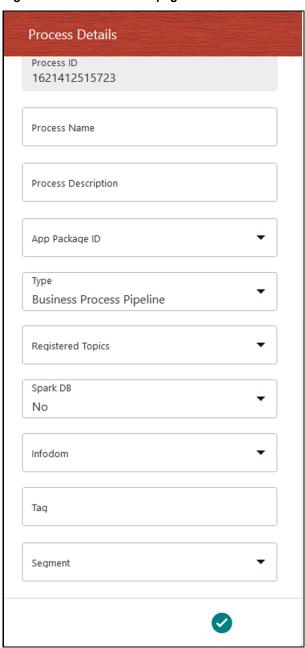
Figure 57: Create a Run Pipeline



To create a new Run pipeline for Insurance Liability Contracts Data Load Process in the Process Modeller, follow these steps:

- 1. From **OFSAA Home**, select **Oracle Insurance Data Foundation**, click **Administration** . In the **Information Domain** list, select the information domain required for OIDF. Then click the **Process** Modelling Framework tile. A submenu is displayed. Click Process Modeller to access the Process Modeller page.
- 2. In the **Process Modeller** page, click
- 3. The Process Details page is displayed.

Figure 58: Process Details page



Enter or select the required values for each field.

Table 34: Process Details page field names and description

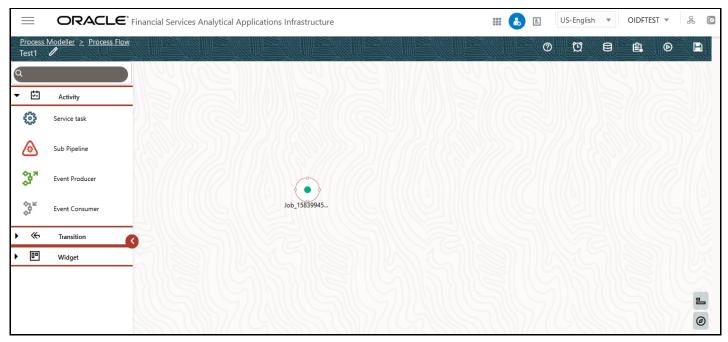
Field Name	Description and instruction
Process ID	This value is automatically generated.
Process Name	Enter a unique and easily recognizable value
Process Description	Enter a unique and easily recognizable value
App Package ID	Select the required application package in which the process must be created from the drop-down list.
Туре	Select the required process type from the <b>Type</b> drop-down list. The options are as follows:
	Business Process Pipeline
	Sub Run Process
	Run Pipeline
	Workflow Pipeline
	Attribution Run
Registered Topics	NOTE:
	This functionality is currently not applicable to OIDF.
Spark DB	Enable the <b>Spark DB</b> option if you are executing the Run for Hive metadata.
Infodom	Select the information domain from the Infodom drop-down list in which the Run Pipeline must be created. The list displays all the infodoms mapped to the applications configured in your OFSAA instance.
Tag	Enter the text that can be used as search keywords or helpful in defining a relationship between two or more Pipelines.
Segment	Select the application segment. The options are as follows:  • OIDFSEG: OIDF segment

**4.** To save the details, click . The **Process Flow** canvas is displayed.

#### **Create a Process Flow for a Run Pipeline** 12.4.4.2

After you click in the **Process Details** page, a process flow canvas page is displayed.

Figure 59: Process Flow Canvas Page

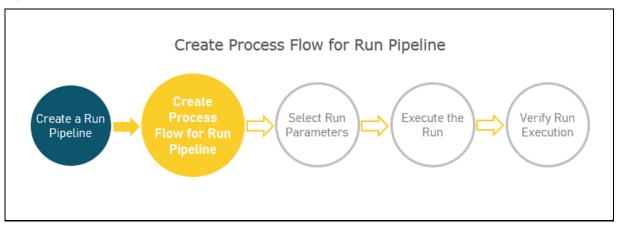


By default, START from the toolbar appears. This Start activity indicates the beginning of the process.

The **Process Flow** tab contains a floating toolbar and a drawing canvas. Use the drawing canvas to design the process flow with the **Activity**, **Transition**, and **Widget** components available in the floating toolbar.

To design a process flow diagram for any Run Pipeline, see the *Run Pipeline* section, and to use several components available in the *Process Flow* tab, see the *Components for Designing Your Process Flow* section in the <u>Oracle Financial Services Analytical Applications Infrastructure Process Modelling</u> Framework Orchestration Guide Release 8.1.1.0.0.

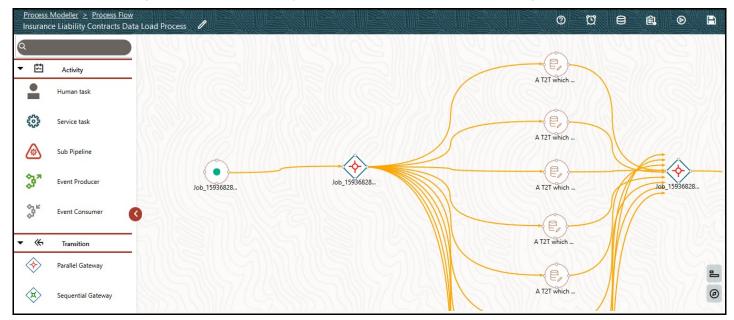
Figure 60: Create Process Flow for Run Pipeline



To create a process flow diagram for an Insurance Liability Contracts Data Load Process (a Run Pipeline for the Fact Common Policy Summary T2T execution) follow these steps:

1. Use the drawing canvas with the LoadT2T widget as the base. In the illustration, each LoadT2T widget represents each of the Insurance Liability Contracts Data Load Process for the Fact Common Policy Summary T2T. The LoadT2T widgets are executed in parallel.

Figure 61: Insurance Liability Contracts Data Load Process Flow Design



2. Double-click a Load T2T widget to configure the details related to its Activity, Transition, and Notification.



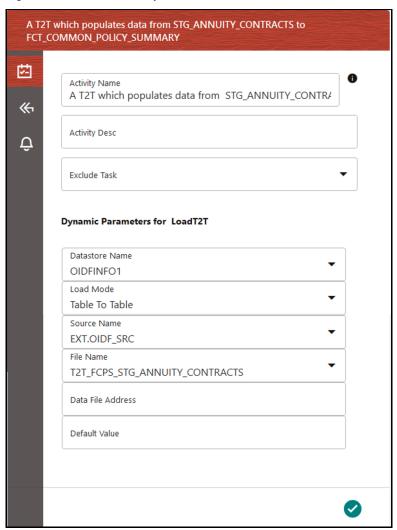
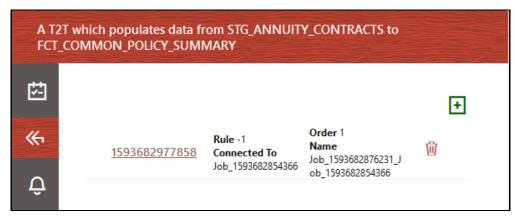
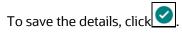


Figure 63: Insurance Liability Contracts Data Load Process with Load T2T widget - Add Transitions **Details** 





3. On the drawing canvas, select the **Definition**, **Data Fields**, **Application Rule** icons to see the respective details.

#### NOTE

To create an Application Rule, see the Application Rules section, and to create a Data Field, see the *Data Fields* section in the Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0.

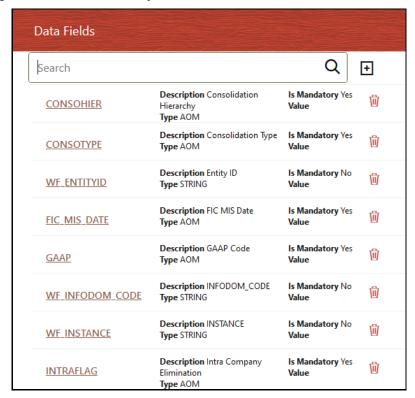
Click to open the Definition details. To save the details, click

Figure 64: Insurance Liability Contracts Data Load Process with Definition Details



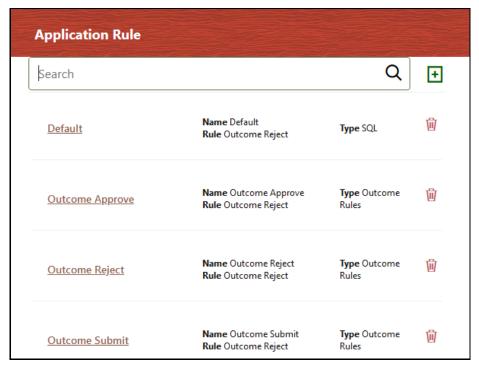
Click to open the Data Fields details. Add, modify, delete, or view the Data Fields details.

Figure 65: Insurance Liability Contracts Data Load Process with Data Fields Details



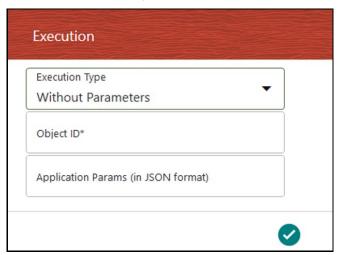
to open the Application Rule details. You can add or modify or delete the Rule details.

Figure 66: Insurance Liability Contracts Data Load Process with Application Rule Details



Click to open the Execution details. To save the details, click

Figure 67: Insurance Liability Contracts Data Load Process without Execution Parameters



Enter and select the required details to execute the Run without parameters. To execute with parameters, select **With Parameters** in the **Execution Type** list. To save the details, click

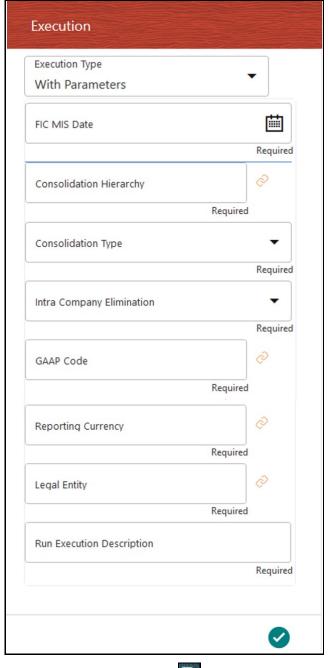


Figure 68: Insurance Liability Contracts Data Load Process with Execution Parameters

4. In the **Process Flow** canvas, click to save the process flow.

To execute the created Run pipeline (process), see the <u>Select the Run Parameters and Execute the Run</u> section.

#### 12.4.4.3 Select the Run Parameters and Execute the Run

After a Run pipeline (process) is designed and defined in the process flow diagram, you must assign values to the Run parameters, and execute the Run. You can execute a Run Pipeline on the UI or using a command-line utility called wfExecExternal.sh.

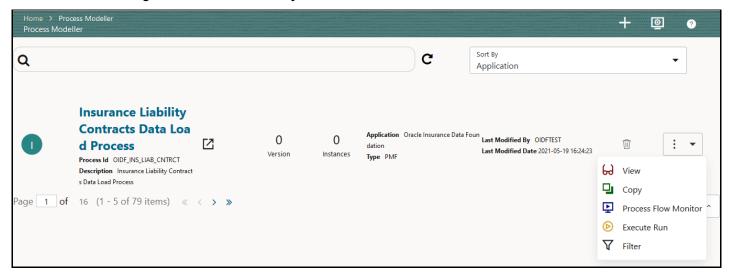
Figure 69: Select Run Parameters and Execute the Run



To select the Run parameters and execute the Run, follow these steps:

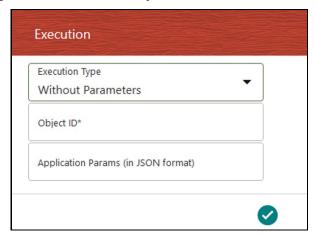
1. In the **Process Modeller** page, click corresponding to the Insurance Liability Contracts Data Load Process that must be executed. Click **Execute Run**.

Figure 70: Insurance Liability Contracts Data Load Process - Select Execute Run



2. The Execution page is displayed. This page consists of the Run parameters specific to the Insurance Liability Contracts Data Load Process.

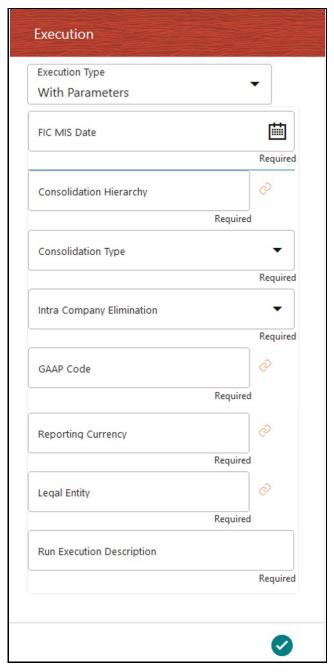
Figure 71: Insurance Liability Contracts Data Load Process - Execution Page Without Parameters



Enter and select the required details to execute the Run without parameters.

To execute with parameters, select **With Parameters** in the **Execution Type** list.

Figure 72: Insurance Liability Contracts Data Load Process - Execution Page With Parameters



Select or enter the required values for each field as follows.

Table 35: Insurance Liability Contracts Data Load Process - Execution Page With Parameters and description

Field Name	Description or Instruction
Reporting Currency	Use the icon to select the Reporting Currency Code used to calculate the amount during the data population in the target table.
Legal Entity	Use the icon to select the Legal Entity Code to identify the legal entity used for the Run.
Consolidation Type	Select the Consolidation Type of legal entities on a solo or consolidation basis. In a Solo Run, only the selected legal entity is used. In a Consolidated Run, along with the selected legal entity, all its child legal entities are also used.
Intra Company Elimination	Select the Intra Company Elimination type to eliminate (YES) or skip the elimination (NO) of Intra Company Accounts during a Consolidated Run.
Consolidation Hierarchy	Use the icon to select the Legal Entity Hierarchy used for the consolidated run. This parameter is not required for the Solo Run.
GAAP Code	Use the icon to select the required accounting standard.
FIC MIS Date	Use the calendar icon to select the extraction date.
Run Execution Description	Enter a longer description of the Run.

3. To save the details and execute the Run, click

#### NOTE

The execution of the Insurance Liability Contracts Data Load Process is triggered using the selected FIC MIS DATE. The Run SKey is generated and inserted into the DIM\_RUN table. For the Run SKey generated, the corresponding user-selected Run parameters are inserted into the RUN\_EXE\_PARAMETERS table.

- **4.** To verify the Run execution status of the Insurance Liability Contracts Data Load Process, see the <u>Verify the Run Execution</u> section.
- 5. To abort, resume, or rerun the process, see the section Abort, Resume, or Rerun the Process.

#### 12.4.4.4 Abort, Resume, or Rerun the Process

In the **Process Monitor** page, click corresponding to the Run Pipeline process that must be aborted, resumed, or rerun. Then select **Abort**, **Resume**, or **Re Run**.

Figure 73: Process Monitor with Re Run, Abort, and Resume options



#### **Abort the Run Process Execution** 12.4.4.4.1

The Abort feature helps you to abort a Run Pipeline (process), which is in the process of execution. To abort a Run process execution, follow these steps:

- 1. In the **Process Monitor** page, click corresponding to the Run process that must be aborted. and then select Abort.
- 2. When the abort is complete, the *Abort Successful* confirmation message is displayed.

#### 12.4.4.4.2 Resume the Run Process Execution

You can resume a Run Pipeline (process), which is not executed successfully, explicitly interrupted, canceled, or put on hold during the execution process. By resuming a Run process execution, you can continue its execution directly from the point of interruption or failure and complete executing the remaining tasks.

To resume a Run process execution, follow these steps:

- 1. In the **Process Monitor** page, click corresponding to the Run process that must be resumed, and then select Resume.
- 2. When the resume is complete, the Resume Execution is Successful confirmation message is displayed.

#### **Rerun the Run Process Execution** 12.4.4.4.3

You can rerun a Run Pipeline (process), which was previously executed irrespective of its previous execution state.

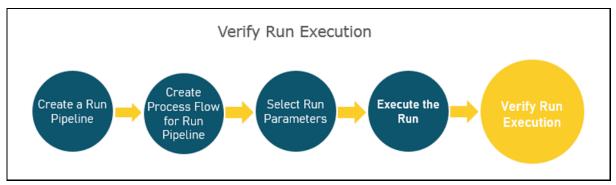
To rerun a Run process execution, follow these steps:

- 1. In the **Process Monitor** page, click corresponding to the Run process that must be rerun, and then click Re Run.
- 2. When the re-run is complete, the Re Run Execution is Successful confirmation message is displayed.

#### **Verify the Run Execution** 12.4.4.5

After the Run pipeline (process) execution, you can check the status of the execution.

Figure 74: Verify Run Execution

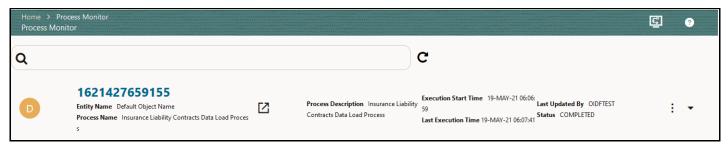


To verify the Run execution, follow these steps:

1. To open the **Process Monitor** page, in the **Process Modeller** page, click or select **Process Flow** View Copy Process Flow Monitor Execute Run  $\nabla$ Filter **Monitor** from the Process Modeller menu

2. In the **Process Monitor** page, for the required Run pipeline that was executed, search the Run instance by Job ID or Process Name, and select the process instance.

Figure 75: Insurance Liability Contracts Data Load Process - Process Monitor Page - Select Job ID



3. A status page opens, which displays the execution status of the executed Run. In this illustration, the Insurance Liability Contracts Data Load Process is successfully executed.

Process Monitor > Process Flow 10 Apply Disabled 0 Refresh Interval (In Min) Auto Refresh Insurance Liability Contracts Data Load Process 竺 A T2T which **63** A T2T which . 37 A T2T which ... Job\_15936828.. 성· A T2T which ..

Figure 76: Insurance Liability Contracts Data Load Process - Run Execution Status

To use a standard out-of-the-box Run pipeline for OIDF functions, see the Use Standard OIDF Run Pipelines section.

For information about the complete functioning of the PMF, see the Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0.

#### **Restatement Support Feature in OIDF** 13

This section provides information about the Restatement Support feature (prior dated Run execution) in the Oracle Insurance Data Foundation application explicitly for the Start Date or End Date attributes.

#### **Topics:**

- **Existing Features Supporting Restatement**
- **Prerequisites**
- Use Case for Restatement in OIDF
- Assumptions for the Implementation of Restatement

#### NOTE

The Restatement Support feature is a part of the OIDF application. This chapter is applicable only if you have followed the post-installation procedure to enable the Restatement Support feature.

When a regulatory body asks a financial institution to revise, make a correction, and refile the report for a prior reporting period, the Restatement Support feature can be used to correct and refile the report. In the Restatement Support feature, using data versioning property, the financial institution can make the required modifications or add a few more data records to the existing report or delete the records from an existing report. The Start Date or End Date attributes of dimensions support the backdated Run execution. Default T2Ts are configured to use Latest Record Indicator to select the appropriate dimensional attributes irrespective of an execution date. Therefore, Start Date or End Date attributes must be used when rerunning the report for a prior date. A backdated Run execution for Restatement Support is similar to a regular Run execution in OIDF.

#### **Existing Features for Restatement Support** 13.1

The existing features in OIDF that support the functioning of Restatement Support are as follows:

- **Data Versioning**
- Data Flow

#### **Data Versioning** 13.1.1

The Data Versioning in OIDF is a feature, where the new snapshot of a report is saved after any modification and the report is rerun for a prior date. Therefore, you obtain access to all the saved versions of a report.

The Data Versioning is supported in OIDF in the following modes:

- Data Versioning in Seeded Data
- Data Versioning in Mappers
- **Incremental Data Load**

### 13.1.1.1 Data Versioning in Seeded Data

Seeded dimensions are of SCD Type 2 in nature. For the Data Versioning in Seeded Data, the updates are constrained, and the new record or codes are introduced.

### 13.1.1.2 Data Versioning in Mappers

Data Versioning supports different versions of the Mapper data. For the Data Versioning in Mappers, the following actions must be performed:

- History tables for each mapper table are introduced to store the Mapper data versioning for each MIS date.
- For a given MIS date during the Run execution, the Mapper history tables are populated from the
  available Mapper tables that are maintained through the UI, and then the Fact table data is
  populated.
- For a backdated execution, if the Mapper data is already available for that prior date, the generation of the history Mappers is restricted.
- Mappers enhanced Fact T2Ts use the history Mappers as the base instead of the MIS date.

### 13.1.1.3 Incremental Data Load

The existing OIDF incremental data load support can be used to correct the Fact table data for a prior date.

### **13.1.2** Data Flow

The Data Flow is supported in OIDF in the following modes:

- The right version of dimensional attributes is considered in the data flow based on the Start Date or End Date attributes.
- In the Joins with Dimensions, the T2Ts are enhanced to utilize Start Date or End Date attributes instead of the Latest Record Indicator.
- The Rules are modified to look-up the right version of the Dimension data in the source or target node selection during the Rule execution.
- The right processing logic is used that is applicable for the prior date.
- An MIS date for which the Restatement based Run is executed, the Mapper data from the Mapper history table is picked up for that Run.

## 13.2 Prerequisites

The prerequisites required for the Restatement Support feature are:

- In the SCDs, there must be no overlapping between the Start Date and End Date attributes.
- For the Dimensions with no available data flow, you must use the custom methods to populate the data. You must ensure that versioning is maintained for those Dimensions.
- You must enhance the T2T metadata to look-up the appropriate version of the Dimension data for all the Dimensions in the list.

- OFSAA does not maintain any versioning for the Seeded Data. The Seeded Data look-up continues to be on the Latest Record Indicator (LRI) and for maintaining any custom Seeded data, a similar approach must be followed.
- You must handle any customized objects used as an alternative to the mentioned impacted objects.

#### **Use Case for Restatement in OIDF** 13.3

This section consists of a use case for Restatement in OIDF.

Consider that an insurance company has missed reporting some accounts or transactions when reporting to the regulator. Then the regulator has asked the insurance company to resubmit the report with complete details. To address this requirement, the insurance company must load the missing entries or reload the complete data set for past dates. Then rerun the reports for that prior date. The Restatement process helps in loading or reloading data into the respective Fact tables by looking-up the right version of the Surrogate keys that is applicable for the prior MIS date. After the data is corrected, the insurance company can re-run the report and resubmit it.

#### **Assumption for the Implementation of Restatement 13.4**

The assumption for the implementation of the Restatement Support is as follows:

The feature is applicable only on the MIS dates versioned after the date on which the Restatement Support feature is enabled.

# 14 Legal Entity Consolidation

The reporting entity may be a part of an Insurance Company that consists of multiple legal entities such as parent or child entities (subsidiaries) under its name. Users can select the entity for which processing must be done. In addition, whether a 'Solo' or 'Consolidation' execution must be done using the Run Execution screen. However, if it is executed using RRF execution then these options must be set up using the rule 'Capital Consolidation Level Selection' in the process 'CAPITAL\_CONSOLIDATION'.

CAPITAL\_CONSOLIDATION is the first process to be added in all the Runs defined through Run Rule Framework except the ones for the staging data population. Run Management screen selects this process by default.

**ATTENTION** 

All the following sections are applicable also to Stage and Results on Hive.

### **Topics:**

- Run Parameters Assignment
- Consolidation Procedures
- Types of Consolidation
- Consolidation Activities
- Legal Entity Tables
- FSI Intracompany Policy Table
- Populating Legal Entity Tables
- Populating FSI Intracompany Tables

### 14.1 Run Parameters Assignment

Run Management Framework in the product allows the reporting Insurance Company to define and execute a Run by selecting a combination of parameters capital computation.

The rule 'Run Definition User Defined Run Param Assignment' is used to assign the run parameters in case of a run executed through the Run Rule Framework. However, if the execution is through Run Management, the parameters are populated based on the run defined in the run definition screen.

### 14.2 Consolidation Procedures

The Consolidation procedures are as follows:

- Combine items of assets, liabilities, equity, income, expenses, and cash flows of the parent with those of its subsidiaries.
- Offset (eliminate) the carrying amount of the investment of the parent in each subsidiary and the
  equity portion of the parent of each subsidiary (IFRS 3 Business Combinations explain how to
  account for any related goodwill).

Eliminate in full intragroup assets and liabilities, equity, income, expenses, and cash flows that relate to transactions between entities of the group (profits or losses resulting from intragroup transactions that are recognized in assets, such as inventory and fixed assets, are eliminated in full).

In the preceding list, the first and third points are partly handled in the consolidation process, second is accounting idea output, which is provided in General Ledger as a part of Stage General Ledger data inputs

#### **Types of Consolidation** 14.3

The types of Consolidation are as follows:

- Simple Aggregation: Aggregate across entities without any elimination.
- Full Consolidation: Aggregate and eliminate intra group transactions.
- Proportionate Consolidation: Aggregate and eliminate intra group transactions and balances reflecting consolidation percentage owned by parents in a subsidiary.

#### **Consolidation Activities 14.4**

Scope of Consolidation is the list of Entities that participate in consolidation. Legal Entity Structure is looked through the Organization Structure Dimension. This stores the parent-child relationship and is stored only once. When moving the data, Legal Entity can move related entities to the processing or reporting area. The legal structure is finalized once, and this structure only stores one parent-child relationship.

This is the Data Flow diagram of Legal Entity consolidation activities.

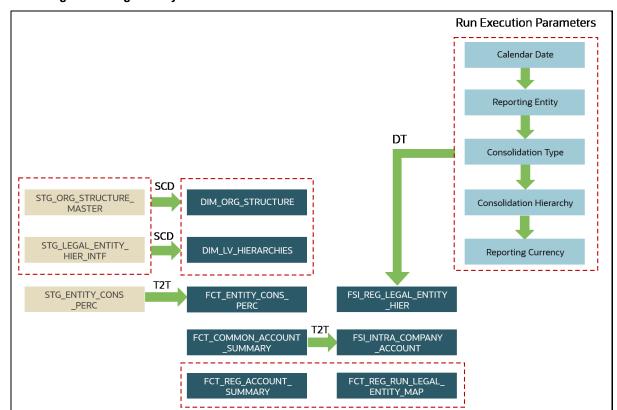


Figure 77: Legal Entity Consolidation Data Flow

#### **Legal Entity Tables** 14.5

This section provides information about Insurance Legal Entity population tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

#### **Topics:**

- **About Legal Entity Dimension Tables**
- About Legal Entity T2T (Result Tables)

#### **About Legal Entity Dimension Tables** 14.5.1

Legal Entity Dimension table name and its description is as follows.

Table 36: Legal Entity Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Legal Entity Group Dimension	This table stores the list of all the defined Legal Entity groups in an organization structure.

The mapping details for the Legal Entity Dimension table is as follows.

Table 37: The mapping details for the Legal Entity Dimension table

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
452	STG_LEGAL_ENTITY	Stage Legal Entity	DIM_LEGAL_ENTIT	Legal Entity Group
	_GROUP_MASTER	Group Master	Y_GROUP	Dimension

#### **About Legal Entity T2T (Result Table)** 14.5.2

Legal Entity T2T table name and its description is as follows.

Table 38: Legal Entity T2T table name and its description

T2T Name	T2T Description
T2T_FCT_LEGAL_ENTITY_DETAILS	Stores the Legal Entity details.

The mapping details for the Legal Entity T2T is as follows.

Table 39: The mapping details for the Legal Entity T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LEGAL_ENTI TY_DETAILS	Stage Legal Entity Details	FCT_LEGAL_ENTITY _DETAILS	Fact Legal Entity Details	T2T_FCT_LEGAL_EN TITY_DETAILS

# 14.6 FSI Intracompany Policy Table

This chapter details the FSI Intracompany Policy table in the Oracle Insurance Data Foundation application.

### **Topics:**

- About Intracompany Policy Table
- Criteria to Qualify as an Intracompany Policy Transaction
- Analyze Different Policy Transaction Scenarios to Qualify as an Intracompany Policy Transaction
- Run-enabled and Non-Run-enabled Tables
- Consolidation Procedures in the Intracompany Policy Table
- About FSI Intracompany Policy T2T (Result Table)

### 14.6.1 About Intracompany Policy Table

The Intracompany Policy table is the Policy table that records the transactions between the legal entities of a company. In the Intracompany Policy table, to record the transactions between the companies belonging to the same group structure, the intercompany policy transactions (the policy transactions between the companies belonging to the different group structures) must be excluded.

### 14.6.2 Criteria to Qualify as an Intracompany Policy Transaction

To exclude an intercompany policy transaction from the Intracompany Policy table, the F\_INTRAGROUP\_EXP\_IND flag is used in the Fact Common Policy Summary table. If the F\_INTRAGROUP\_EXP\_IND flag is set to Y, it indicates that the two companies belong to the same organizational structure and the corresponding policy transactions are then included in the Intracompany Policy Entity. The remaining transactions are not considered as intracompany transactions.

Now, the policy transaction must qualify these two criteria to be included as an Intracompany Policy transaction in the Intracompany Policy table:

- Both companies (the Policy issuing Entity and Party) must belong to the same organization group structure.
- The Party must be a Beneficiary of the Policy.

When the two criteria are met by a policy transaction, only then in the Fact Common Policy Summary table, the F\_INTRAGROUP\_EXP\_IND flag is set to Y; and the policy transaction is added as a record in the FSI\_INTRA\_COMPANY\_POLICY table.

# 14.6.3 Analyze Different Policy Transaction Scenarios to Qualify as an Intracompany Policy Transaction

There are different scenarios to analyze a policy transaction between two companies. This analysis decides whether the policy transaction qualifies as an Intracompany Policy transaction.

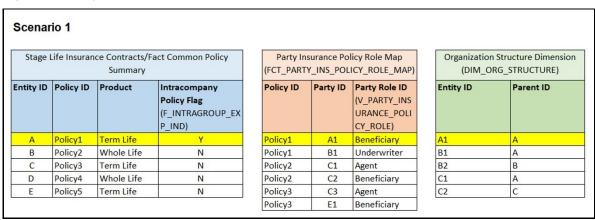
The policy transaction scenarios are explained using these tables:

- Life Insurance Contracts table:
  - Stage Life Insurance Contracts (STG\_LIFE\_INS\_CONTRACTS): This table consists of the Policy issuing Entity and the issued Policy ID.
  - Fact Common Policy Summary (FCT\_COMMON\_POLICY\_SUMMARY): This table consists of the Policy issuing Entity, issued Policy ID, and the Intracompany Policy Flag.
- Party Insurance Policy Role Map (FCT\_PARTY\_INS\_POLICY\_ROLE\_MAP): This table consists of the list of Parties mapped to the issued Policy as a Party Role (Beneficiary, Agent, Underwriter, and so on).
- Organization Structure Dimension (DIM\_ORG\_STRUCTURE): This table is used to determine
  whether the Policy issuing Entity and its Party have the same Parent or the same organization
  group structure. When the Policy issuing Entity and its Party are a part of the same organization
  group structure, it is called as Intracompany.

The policy transaction scenarios are as follows:

• Scenario 1: When the Policy issuing Entity and its Party belongs to the same organization group structure, and the Party Role is a Beneficiary, then the Intracompany Policy flag is set to Y.

Figure 78: Policy Transaction scenario 1



In illustration Scenario 1, observe the following:

- **a.** In the Stage Life Insurance Contracts table, refer to Policy1. A is the Policy issuing Entity, which owns Policy1.
- **b.** Verify whether the Party associated with the Policy1 is a Beneficiary or not. Refer to the Party Insurance Policy Role Map table. The V\_PARTY\_INSURANCE\_POLICY\_ROLE column lists the Party Roles associated with Policy1. Two Party Roles are associated with Policy1, namely, A1 and B1. A1 is a Beneficiary, however, B1 is an Underwriter as depicted in the V\_PARTY\_INSURANCE\_POLICY\_ROLE column.

- c. Refer to the DIM\_ORG\_STRUCTURE table to see if the Beneficiary and the Policy issuing Entity are a part of the same organization group structure. As highlighted in the illustration, A1 associated with the Beneficiary and the Entity A is a part of the same organization group structure. Therefore, the Intracompany group structure flag is set to Y.
- **d.** Therefore, in the Fact Common Policy Summary table, the Intracompany Policy Flag (F\_INTRAGROUP\_EXP\_IND) column value is set to Y.

Therefore, this Policy contract between these two companies is included in the Intracompany Policy table.

Scenario 2: When the Policy issuing Entity and its Party belongs to the same organization group structure, and the Party Role is not a Beneficiary, then the Intracompany Policy flag is set to N.

Figure 79: Policy Transaction scenario 2

Stage I	ife Insuran		act Common Policy			licy Role Map		n Structure Dimensio
		Summary		(FCT_PART	Y_INS_POL	ICY_ROLE_MAP)	(DIM_C	ORG_STRUCTURE)
Entity ID	Policy ID	Product	Intracompany Policy Flag	Policy ID	Party ID	Party Role ID (V PARTY INS	Entity ID	Parent ID
			(F_INTRAGROUP_EX P_IND)			URANCE_POLI CY_ROLE)		
А	Policy1	Term Life	Υ	Policy1	A1	Beneficiary	A1	А
В	Policy2	Whole Life	N	Policy1	B1	Underwriter	B1	А
С	Policy3	Term Life	N	Policy2	C1	Agent	B2	В
D	Policy4	Whole Life	N	Policy2	C2	Beneficiary	C1	Α
E	Policy5	Term Life	N	Policy3	C3	Agent	C2	С
			· · · · · · · · · · · · · · · · · · ·	Policy3	E1	Beneficiary		•

In illustration Scenario 2, observe the following:

- a. In the Stage Life Insurance Contracts table, refer to Policy1. A is the Policy issuing Entity, which owns Policy1.
- **b.** Verify whether the Party associated with the Policy1 is a Beneficiary or not. Refer to the Party Insurance Policy Role Map table. The V\_PARTY\_INSURANCE\_POLICY\_ROLE column lists the Party Roles associated with Policy1. Two Party Roles are associated with Policy1, namely, A1 and B1. A1 is a Beneficiary, however, B1 is an Underwriter as depicted in the V\_PARTY\_INSURANCE\_POLICY\_ROLE column.
- c. Refer to the DIM\_ORG\_STRUCTURE table. The Party B1 and Entity A are a part of the same organization group structure. Therefore, the Intracompany group structure flag is set to Y.
- **d.** However, the Party Role is an Underwriter. As a result, in the Fact Common Policy Summary table, the Intracompany Policy Flag (F\_INTRAGROUP\_EXP\_IND) column value is set to N.

Therefore, the Policy transactions between these two companies are excluded from the Intracompany Policy table.

Scenario 3: When the Party Role is a Beneficiary, and the Policy issuing Entity and its Party belongs to different organization group structures, then the Intracompany Policy flag is set to N.

Figure 80: Policy Transaction scenario 3

Stage l	ife Insuran		act Common Policy			licy Role Map		Structure Dimension
	~	Summary		(FCT_PART	Y_INS_POL	ICY_ROLE_MAP)	(DIM_O	RG_STRUCTURE)
Entity ID	Policy ID	Product	Intracompany	Policy ID	Party ID	Party Role ID	Entity ID	Parent ID
			Policy Flag			(V_PARTY_INS		
			(F_INTRAGROUP_EX			URANCE_POLI		
			P_IND)			CY_ROLE)		
Α	Policy1	Term Life	Y	Policy1	A1	Beneficiary	A1	Α
В	Policy2	Whole Life	N	Policy1	B1	Underwriter	B1	А
С	Policy3	Term Life	N	Policy2	C1	Agent	B2	В
D	Policy4	Whole Life	N	Policy2	C2	Beneficiary	C1	A
E	Policy5	Term Life	N	Policy3	C3	Agent	C2	С
		•	<u> </u>	Policy3	E1	Beneficiary	-	

In illustration Scenario 3, observe the following:

- a. In the Stage Life Insurance Contracts table, refer to Policy2. B is the Policy issuing Entity, which owns Policy2.
- b. Verify whether the Party associated with the Policy2 is a Beneficiary or not. Refer to the Party Insurance Policy Role Map table. The V\_PARTY\_INSURANCE\_POLICY\_ROLE column lists the Party Roles associated with Policy2. Two Party Roles are associated with Policy2, namely, C1 and C2. C1 is an Agent and C2 is a Beneficiary as depicted in the V\_PARTY\_INSURANCE\_POLICY\_ROLE column.
- c. Refer to the DIM\_ORG\_STRUCTURE table to see if the Beneficiary and the Policy issuing Entity are a part of the same organization group structure. As highlighted in the illustration, C2 associated with the Beneficiary and Entity B are a part of the different organization group structures. Therefore, the Intracompany group structure flag is set to N.
- d. Therefore, in the Fact Common Policy Summary table, the Intracompany Policy Flag (F\_INTRAGROUP\_EXP\_IND) column value is set to N.

The Policy transactions between these two companies are not intracompany and therefore, not added to the Intracompany Policy table.

#### 14.6.4 **Run-enabled and Non-Run-enabled Tables**

These are the descriptions for the Run-enabled and Non-Run-enabled tables:

- Run-enabled tables: The Oracle Insurance Data Foundation Execution Run can be executed any number of times per day with each unique Run SKey for data movement in the Run-enabled tables.
- Non-Run-enabled tables: The Oracle Insurance Data Foundation Source Run can be executed once per day for Data Movement from Staging Area to Results Area for Non-Run SKey tables.

#### **NOTE**

The records that enter the FSI\_INTRA\_COMPANY\_POLICY table must not be entered into any other Run-enabled tables. The process mentioned for the Intracompany identification and consolidation will not be as expected unless processing or reporting application refers and reflect the same as required in the application-specific metadata. The same principle also applies to customized metadata.

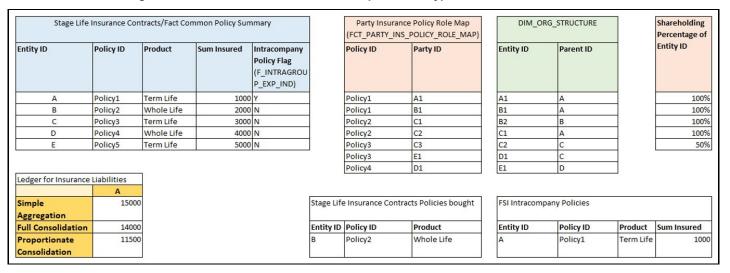
### 14.6.5 Consolidation Procedures in the Intracompany Policy Table

The supported Consolidation procedures applicable to the Intracompany Policy tables are as follows:

- Simple Aggregation
- Full Consolidation
- Proportionate Consolidation

This is a use case representation for the Consolidation procedure types:

Figure 81: Use case for the Consolidation procedure types



The pictorial representation is explained in the following sections.

### 14.6.5.1 Simple Aggregation

In a Simple Aggregation consolidation procedure, all the account transactions in an entity are aggregated. The entity can be a Parent or Child.

The following logic is used for a Simple Aggregation consolidation procedure:

- Identify the list of entities to be added based on the organization structure.
   In the illustration, see the DIM\_ORG\_STRUCTURE table. For the consolidation of Entity A, the child entities are A, B, C, D, and E.
- **2.** Aggregate both the Accounts and the General Ledger transactions. The aggregation of the General Ledger transactions is the addition of General Ledgers of the entities in the list.
  - In the illustration, see the Stage Life Insurance Contracts or Fact Common Policy Summary table and the Sum Insured column. Add the Sum Insured amount of the entities A, B, C, D, and E. The total amount is 15000 for the Simple Aggregation in Entity A.
- **3.** This process does not identify intragroup transactions. As a result, intragroup transactions are also included.

#### 14.6.5.2 Full Consolidation

In a Full Consolidation procedure, all the account transactions in an entity are aggregated and the Intergroup transactions are eliminated. This is repeated for each entity involved and the results are added.

The following logic is used for a Full Consolidation procedure:

- 1. Identify the list of entities to be added based on the organization structure.
  - In the illustration, see the DIM\_ORG\_STRUCTURE table. For the consolidation of Entity A, the child entities are A, B, C, D, and E.
- 2. Aggregate both the Accounts and the General Ledger transactions.
  - In the illustration, see the Stage Life Insurance Contracts or Fact Common Policy Summary table and the Sum Insured column. Add the Sum Insured amount of the entities A, B, C, D, and E. The total amount is 15000.
- 3. Exclude all the Intragroup transactions.
  - In the illustration, see the FSI Intracompany Policies table. The transaction between the entities A and A1 is considered as an intragroup transaction. Therefore, exclude the Sum Insured of Entity A (Sum Insured=1000) from the total amount. The new total amount is 14000 for Full Consolidation in Entity A.
- 4. Repeat steps 2 and 3 for each entity.

### 14.6.5.3 Proportionate Consolidation

In a Proportionate Consolidation procedure, the account transactions for each Entity (performing Simple Aggregation) are added. To this, the share of profits and expenses in the Entity, where the entity holds the stake are added. Then the Intergroup transactions are eliminated.

The following logic is used for a Proportionate Consolidation procedure:

- 1. Identify the list of entities to be added based on the organization structure.
  - In the illustration, see the DIM\_ORG\_STRUCTURE table. For the consolidation of Entity A, the child entities are A, B, C, D, and E.
- **2.** When one entity holds a stake in another entity, follow these steps:
  - When the Balance Sheet is prepared for the Parent entity, follow these steps:
    - i. Multiply each of the Account and the General Ledger transaction with the percentage that the Parent entity holds as a stake in the Child entity.
      - In the illustration, see the Shareholding Percentage of Entity ID table. Entity A holds a 100% stake in A, B, C, and D, and a 50% stake in E. Therefore, the resultant amounts are 1000, 2000, 3000, 4000, and 2500 respectively.
    - **ii.** Aggregate the Accounts and the General Ledger transaction results from the previous step.

The summation of the amount from the previous step is 12500.

- When the Balance Sheet is prepared for the Child entity, follow these steps:
  - i. Multiply each of the Account and the General Ledger transaction with the percentage that the Child entity holds as a stake in its own company.
  - **ii.** Aggregate the Accounts and the General Ledger transaction results from the previous step.
- **3.** Exclude all the intragroup transactions.

In the illustration, see the FSI Intracompany Policies table. The transaction between the entities A and A1 is considered as an intragroup transaction. Therefore, exclude the Sum Insured of Entity A (Sum Insured=1000) from the amount in the previous step. The new total amount is 11500 for the Proportionate Consolidation in Entity A.

### 14.6.6 About FSI Intracompany Policy T2T (Result Table)

The FSI Intracompany Policy T2T and its description are as follows.

Figure 82: The FSI Intracompany Policy T2T and its description

T2T Name	T2T Description
T2T_FSI_INTRA_COMPANY_POLICY	Stores details of all the intracompany policy transactions.

The T2T mapping details for the FSI Intracompany Policy are as follows.

Figure 83: The T2T mapping details for the FSI Intracompany Policy

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_ANNUITY_C	Stage Annuity	FCT_COMMON_POLI	Fact Common	T2T_FSI_INTRA_COMPA
ONTRACTS	Contracts	CY_SUMMARY	Policy Summary	NY_POLICY
STG_HEALTH_IN	Stage Health	FCT_COMMON_POLI	Fact Common	T2T_FSI_INTRA_COMPA
S_CONTRACTS	Insurance Contracts	CY_SUMMARY	Policy Summary	NY_POLICY
STG_LIFE_INS_C	Stage Life Insurance	FCT_COMMON_POLI	Fact Common	T2T_FSI_INTRA_COMPA
ONTRACTS	Contracts	CY_SUMMARY	Policy Summary	NY_POLICY
STG_PROP_CASU ALTY_CONTRAC TS	Stage Property Casualty Contracts	FCT_COMMON_POLI CY_SUMMARY	Fact Common Policy Summary	T2T_FSI_INTRA_COMPA NY_POLICY
STG_RETIREMEN	Stage Retirement	FCT_COMMON_POLI	Fact Common	T2T_FSI_INTRA_COMPA
T_ACCOUNTS	Accounts	CY_SUMMARY	Policy Summary	NY_POLICY

## 14.7 Populating Legal Entity Tables

This section provides information about populating the Legal Entity tables.

### 14.7.1 Deploying Legal Entity Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

#### **Populating Legal Entity Dimension Tables 14.7.2**

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and Check Error Messages.

#### **Populating Legal Entity T2T Result Table** 14.7.3

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **Populating FSI Intracompany Tables 14.8**

This section provides information about populating the FSI Intracompany tables.

#### **Deploying FSI Intracompany Policy Table on Hive** 14.8.1

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

#### Populating FSI Intracompany Policy T2T Result Table 14.8.2

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# 15 Exchange Rates Tables

This section provides information about the Exchange Rates tables in the Oracle Insurance Data Foundation application.

#### **Topics:**

- Handle Alternate Currency
- Business Use Case Indicating the Requirement of two Exchange Rates Tables
- Overview of the Exchange Rates Table
- About Exchange Rates T2Ts (Result Tables)
- Deploying Exchange Rates Tables on Hive
- Populating Exchange Rates T2T Result Table

The Exchange Rates table stores the list of all exchange rates for all types of currency. These are standalone tables.

The purpose of the Exchange Rate tables is to offer the value of one currency in relation to another currency.

### 15.1 Handle Alternate Currency

In a downloadable format, the customers supply the Exchange Rates information. The applications may require the information in a different format. The current Exchange Rates population is enhanced to store the following variations:

- Inverse Rate: When the exchange rate information of two currencies is provided for a base and a counter currency, the inverse rates if not available is derived and populated.
- Triangulation Rate: When exchange rate information of two pairs are available as part of the download, with a common currency in each of the pair, the exchange rate for currencies not common as part of the download pair is derived and populated.

# 15.2 Business Use Case Indicating the Requirement of Two Exchange Rates Tables

All the balance sheet computations are done based on the average price or the closing price. For illustration, assume that an insurance company has branches in multiple countries, and therefore, multiple exchange rates scenarios exist. Then the insurance company must decide to choose the closing price of the exchange rate. Therefore, the insurance company computes the balance sheet based on the entity in each country. Assume that the insurance company is operative in four different countries. If the legal entity is based on country A, then A category of prices is used for balance sheet computation, and if the legal entity is based on country B, then B category of prices is used, and C category of prices based on country C, and D category of prices based on country D.

To achieve this, for a single day, the insurance company captures multiple exchange rates because of different countries. For Currency A to Currency B, the insurance company must capture three pairs of exchange rates. OIDF handles this type of scenario using the Rate Data Source Code, which is based on the data source. The insurance company chooses the time zone.

The insurance company creates different data sources such as country AB, country AC, and country AD. A mapping exists from Legal Entity to each data source. If the Legal Entity is of country B, then the insurance company uses AB as the data source and all the prices of data source AB are used to compute all the transactions. This is the business use case that resulted in the requirement of two Exchange Rates tables in OIDF.

The existing Stage Exchange Rates table cannot be modified due to the presence of the PK column. The existing customers also do not need two Stage Exchange Rates tables.

## 15.3 Overview of the Exchange Rates Table

OIDF has two Exchange Rates Staging tables. They are:

- STG\_EXCHANGE\_RATE\_HIST
- STG\_FORWARD\_EXCHG\_RATES

Spot rates will be loaded with Tenor 0.

The Exchange Rate table FSI\_EXCHANGE\_RATES is loaded from a View table VW\_FSI\_RATE\_TRIANGULATION, where the VW\_FSI\_RATE\_TRIANGULATION table is created on top of the Exchange Rates Stage tables through the T2T process.

Prior to the OIDF 8.1.0.0.0 release, T2T to load data from STG\_EXCHANGE\_RATE\_HIST was only provided for exchange rates. Now T2T for loading data from STG\_FORWARD\_EXCHG\_RATES is also provided. There are two different data loading categories in OIDF for the Exchange Rates tables. They are:

- The data loading method supported for the Exchange Rates table from the OIDF 8.1.0.0.0 release.
- The data loading method supported the Exchange Rates table for the OIDF 8.0.9.0.0 and earlier versions.

### 15.3.1 Data Loading Method Supported by the OIDF 8.1.0.0.0 Release

The existing customers can follow the new data loading method for the Exchange Rates tables. However, the new customers must follow this new data loading method for the Exchange Rates tables. In the new method, the data loads from the View table VW\_FSI\_RATE\_TRIANGULATION into the Stage table STG\_FORWARD\_EXCHG\_RATES.

NOTE

This is the only data loading method available in the v8.1.0.0.0 and onward releases for the Exchange Rates tables.

# 15.3.2 Data Loading Method Supported for the OIDF 8.0.9.0.0 and Earlier Releases

Only the existing customers can follow the earlier data loading methods for the Exchange Rates tables.

**ATTENTION** The method of data loading into the STG\_EXCHANGE\_RATE\_HIST table is no more supported in the OIDF v8.1.0.0.0 and onward versions for the Exchange Rates tables.

In an integrated environment, there can be a scenario, where the customer is using two applications and each of the applications refer to the STG\_FORWARD\_EXCHG\_RATES table or the STG\_EXCHANGE\_RATE\_HIST table. This scenario can result in duplicate data loads into the STG\_FORWARD\_EXCHG\_RATES and STG\_EXCHANGE\_RATE\_HIST tables. For this scenario, these are the recommendations:

- For the data load, the STG\_EXCHANGE\_RATE\_HIST table supersedes the STG\_FORWARD\_EXCHG\_RATES table.
- The implementation team ensures that T2T\_FSI\_EXCHANGE\_RATES is used for the STG\_EXCHANGE\_RATE\_HIST table data load.
- The STG\_EXCHANGE\_RATE\_HIST table loads the FSI\_EXCHANGE\_RATES table.

## **15.4** About Exchange Rates T2Ts (Result Tables)

The following are two Exchange Rates T2Ts:

- T2T\_FSI\_EXCHANGE\_RATES
- T2T\_FSI\_EXCHANGE\_RATES\_FRWD

# 15.4.1 About Exchange Rates T2T for the STG\_EXCHANGE\_RATE\_HIST table

Exchange Rates T2T for the STG\_EXCHANGE\_RATE\_HIST table and its description is as follows.

Figure 84: Exchange Rates T2T for the STG\_EXCHANGE\_RATE\_HIST table and its description

T2T Name	T2T Description
T2T_FSI_EXCHANGE_RATES	This T2T stores history of the exchange rates between two currencies sourced through the STG_EXCHANGE_RATE_HIST table.

The mapping details for the Exchange Rates T2T is as follows.

NOTE Ensure to verify and load data into the STG\_EXCHANGE\_RATE\_HIST table using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

Source Table	Logical Stage	Fact Table	Logical Fact Table	T2T Name
Name	Table Name	Name	Name	
VW_FSI_RATE_TRI ANGULATION	FSI Rate Triangulation View	FSI_EXCHANGE_ RATES	FSI Exchange Rates	T2T_FSI_EXCHANGE_ RATES

Figure 85: The mapping details for the Exchange Rates T2T

# 15.4.2 About Exchange Rates T2T for the STG\_FORWARD\_EXCHG\_RATES table

T2T\_FSI\_EXCHANGE\_RATES\_FRWD is added in the OIDF 8.1.0.0.0 release. The Exchange Rates T2T for the STG\_FORWARD\_EXCHG\_RATES table and its description is as follows.

Figure 86: The Exchange Rates T2T for the STG\_FORWARD\_EXCHG\_RATES table

T2T Name	T2T Description
T2T_FSI_EXCHANGE_RATES_FRWD	This T2T stores history of the exchange rates between two currencies sourced through the STG_FORWARD_EXCHG_RATES table.

The mapping details for the Exchange Rates T2T is as follows.

NOTE
Only this T2T is a part of the OOTB Runchart.

Ensure to verify and load data into the STG\_FORWARD\_EXCHG\_RATES table using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

Figure 87: The mapping details for the Exchange Rates T2T

Source Table	Logical Stage	Fact Table	Logical Fact Table	T2T Name
Name	Table Name	Name	Name	
VW_FSI_RATE_TRI ANGULATION	FSI Rate Triangulation View	FSI_EXCHANGE_ RATES	FSI Exchange Rates	T2T_FSI_EXCHANGE_ RATES_FRWD

## 15.5 Deploying Exchange Rates Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List</u> of <u>Unsupported T2Ts</u>

## 15.6 Populating Exchange Rates T2T Result Table

Execute the T2T process through the Oracle Insurance Data Foundation Execution Run in the Process Modelling Framework.

NOTE

When executing the Run, the Run SKey is auto-generated and stamped against each record.

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

FSI\_EXCHANGE\_RATES table must be loaded prior to loading any of the Account Summary tables.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - b. Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

## 16 Party Subject Area

This section provides information about the Party Dimension loading process and populating several Party Attributes Results tables in the Oracle Insurance Data Foundation application.

#### **Topics:**

- Overview
- Party Dimension Table
- Party Definition Tables
- Party Contact Details Tables
- Party Identification Document Tables
- Party Medical Attributes Tables
- Party Financial Data or Employment Attributes Tables
- Party Producer Exam, Certification, and License Tables
- Party Results Tables
- Other Party Attributes Tables
- Deploying Party related Tables on Hive
- Populating Party related Dimension Tables
- Populating Party related T2Ts (Result Tables)
- Related Topics

### 16.1 Overview

Party refers to any person or organization that interacts with the Insurance Company while Party Attributes refers to information elements associated with any person or organization that interacts with the Insurance Company.

Correspondingly, Party tables can be classified into Party Dimension tables and Party T2T tables. The Party Dimension tables store the history of a Party and different types of Party T2Ts store the history of a Party specific to the attributes.

## 16.2 Party Dimension Table

Party Dimension table stores the history of a Party. A Party here can be a customer, issuer, guarantor, and so on.

#### NOTE

Party Dimension table must be populated before populating any other Party related Dimension table.

Following are the two customer-based dimensions that are used across several OFSAA applications for their processing and reporting requirements:

- DIM\_PARTY
- DIM\_CUSTOMER

In the current release, data is sourced from STG\_PARTY\_MASTER to the above Dimension tables.

To address the Bug 20486362 - SCD TO POPULATE DIM\_CUSTOMER FROM STG\_PARTY\_MASTER TO BE ADDED, a new SCD (MAP\_REF\_NUM = 335) was introduced in OIDF release 8.0.1.0.0 to load DIM\_CUSTOMER using STG\_PARTY\_MASTER and STG\_PARTY\_ROLE\_MAP as the source. Customers, who use applications that have a dependency on DIM\_PARTY, are advised to use this SCD instead of SCD-32. Execute batch DIM\_CUSTOMER\_SCD\_PARTY to populate DIM\_CUSTOMER using STG\_PARTY\_MASTER and STG\_PARTY\_ROLE\_MAP as the source.

### 16.2.1 Using Stage Party Master to Load Party Dimension

The Party Master table contains information related to a person or an organization that is a party to the Insurance Company. Party refers to the customer, issuer, guarantor, and so on. This table holds the master list of parties across all the roles and their details such as name, age, education, profession, gender, and so on.

Party ID: Party identifier is a code that identifies whether the Party ID provided for a party is an organization identifier or a private identifier.

The mapping details to load to the Party Dimension table from the Stage Party Master table is given here.

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table
Number	Name	Name	Name	Name
117	STG_PARTY_MAST	Stage Party Master	DIM_PARTY	Party Dimension

Table 40: The mapping details to load the Party Dimension table from the Stage Party Master table

### 16.2.2 Using Stage Party Type Master to Load Party Type Dimension

The Party Type Master table contains information related to the type of the Party that may be an Individual, an Insurance Company, a Corporate - Small, a Corporate - Medium, a State Government, and a Sovereign, and so on.

Party ID: Party identifier is a code that identifies whether the Party ID provided for a party is an organization identifier or a private identifier.

The mapping details to load to the Party Dimension Type table from the Stage Party Type Master table is given here.

Table 41: The mapping details to load the Party Dimension Type table from the Stage Party Type Master table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
180	STG_PARTY_TYPE _MASTER	Stage Party Type Master	DIM_PARTY_TYPE	Party Dimension Type

# 16.2.3 Using Stage Party Role Map to Populate Party Role Map T2T (Result Table)

**NOTE** Load STG\_PARTY\_ROLE\_MAP with all customer records and Party Role must be 'CUSTOMER'.

The Party Role Map table stores information related to different roles that are played by a Party. Roles here refer to Beneficiary, Producer, Agent, Issuer, and so on. If the same party plays multiple roles, one needs to update the party role map entity continuing with the same record in stage party master with or without role-specific data addition.

The mapping details to populate the Party Role Map T2T is given here.

Table 42: The mapping details to populate the Party Role Map T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_RO LE_MAP	Stage Party Role Map	FCT_PARTY_ROLE_ MAP	Fact Party Role Map	T2T_FCT_PARTY_ROL E_MAP

# 16.3 Party Definition Tables

Party Definition consists of the details related to Party such as Annual Income, Primary Source of Wealth, and Probability of Default Percentage, and so on.

The purpose of Party Definition tables is to store personal information of a Party to check whether the premium is paid on a regular basis with no default on the payments, and the coverage is as per the income calculation of the Party.

### 16.3.1 About Party Definition T2Ts (Result Tables)

Party Definition T2T consists of the Party and Party Probability of Default details.

Party Definition T2Ts and their description are given here.

Table 43: Party Definition T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PARTY_DETAILS	This T2T stores information related to Party such as Annual Income, and Primary Source of Wealth, and so on.
T2T_FCT_PARTY_PD_DETAILS	This T2T stores the probability of default values as of the given date for all relevant parties.

The mapping details for the Party Definition T2Ts are given here.

Table 44: The mapping details for the Party Definition T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_DE TAILS	Stage Party Details	FCT_PARTY_DETAILS	Fact Party Details	T2T_FCT_PARTY_DETAILS
STG_PARTY_PD _DETAILS	Stage Party Probability of Default Details	FCT_PARTY_PD_D ETAILS	Fact Party Probability of Default Details	T2T_FCT_PARTY_PD_DET AILS

NOTE

The FSI\_PARTY\_STD\_PARTY\_TYPE\_MAP table has been added for mapping purposes if the customer so desires. This table stores Party Standard Party Type mapping details.

#### **16.4 Party Contact Details Tables**

Party Contact Details consist of details about the phone.

The purpose of these tables is that the Party contact data can be used in KYC document related tables.

#### **About Party Contact Details Dimension Tables** 16.4.1

Party Contact Details Dimension table names and their description are given here.

Table 45: Party Contact Details Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Address Dimension	This table stores the master address details.
Contact Dimension	This table stores the list of contacts imported by the Insurance Company.
Email Address Purpose Type Dimension	This table stores the email address purpose, or usage, of this address relative to this customer.
Phone Purpose Type Dimension	This table stores the phone purpose type, or usage, of this phone relative to this account.
Phone Dimension	This table stores the phone number of the Party.
Email Dimension	This table stores the email ID of the Party.

The mapping details for the Party Contact Details Dimension tables are given here.

Table 46: The mapping details for the Party Contact Details Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
346	STG_ADDRESS_MAST ER	Stage Address Master	DIM_ADDRESS	Address Dimension
144	STG_CONTACT_MAST ER	Stage Contact Master	DIM_CONTACT	Contact Dimension
667	STG_EMAIL_ADRS_PR P_TYPE_MASTER	Stage Email Address Purpose Type Master	DIM_EMAIL_ADRS _PRP_TYPE	Email Address Purpose Type Dimension
668	STG_PHONE_PURPOS E_TYPE_MASTER	Stage Phone Purpose Type Master	DIM_PHONE_PURP OSE_TYPE	Phone Purpose Type Dimension
982	STG_PARTY_PHONE_ MAP	Stage Party Phone Map	DIM_PHONE	Phone Dimension
985	STG_PARTY_EMAIL_ MAP	Stage Party Email Map	DIM_EMAIL	Email Dimension

#### **About Party Contact T2Ts (Result Tables)** 16.4.2

Party Contact Details T2T and its description are given here.

Table 47: Party Contact Details T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PARTY_ADDRESS_MAP	This T2T stores the Party address details.

The mapping details for the Party Contact Details T2T is given here.

Table 48: The mapping details for the Party Contact Details T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_ADD	Stage Party Address	FCT_PARTY_ADDR	Fact Party Address	T2T_FCT_PARTY_ADD
RESS_MAP	Map	ESS_MAP	Map	RESS_MAP

#### **Party Identification Document Tables** 16.5

The Party Identification Document contains the identification details of an individual Party. Identification means the action or process of identifying someone or something, or the fact of being identified.

The purpose of Party Identification Document tables is that the data from these tables can be used in the Know Before You Owe related tables.

### 16.5.1 About Party Identification Document Dimension Tables

Party Identification Document Dimension table names and their description are given here.

Table 49: Party Identification Document Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Document Type Dimension	This table stores the list of all types of documents that are required by the insurance company for an account. The document types can be those specified by the Insurance Company or those required for the process in the Insurance Company.
Document Sub Type Dimension	The table stores the document subtype.  Sample values: If the document type is visa then the subtype is student or tourist visa.

The mapping details for the Party Identification Document Dimension tables are given here.

Table 50: The mapping details for the Party Identification Document Dimension tables

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
457	STG_DOCUMENT_T	Stage Document	DIM_DOCUMENT_TY	Document Type
	YPE_MASTER	Type Master	PE	Dimension
553	STG_DOCUMENT_S	Stage Document	DIM_DOCUMENT_SU	Document Sub Type
	UB_TYPE_MASTER	Sub Type Master	B_TYPE	Dimension

## 16.5.2 About Party Identification Document T2T (Result Table)

Party Identification Document T2T and its description is given here.

Table 51: Party Identification Document T2T and its description

T2T Name	T2T Description
T2T_FCT_PARTY_IDENTIFCTN_DOC	This T2T stores identification details of an individual Party. Identification means the action or process of identifying someone or something, or the fact of being identified.

The mapping details for the Party Identification Document T2T is given here.

Table 52: The mapping details for the Party Identification Document T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_IDEN TIFICATION_DOC	Stage Party Identification Document	FCT_PARTY_IDENTIF ICATION_DOC	Fact Party Identification Document	T2T_FCT_PARTY_IDEN TIFCTN_DOC

## 16.6 Party Medical Attributes Tables

Party Medical Subject Area covers information elements pertaining to medical treatment or tests or conditions.

The purpose of the Party Medical attributes tables is to cover detail medical history of applicant or policyholder and use the data in either underwriting or continuing the existing insurance coverage.

### **16.6.1** About Party Medical Attributes Dimension Tables

Party Medical Attributes Dimension table names and their description are given here.

Table 53: Party Medical Attributes Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Medical Test Type Dimension	This table stores the medical test details that the Party has undergone. A medical test is a kind of medical procedure performed to detect, diagnose, or monitor diseases, disease processes, susceptibility, and determine a course of treatment. It is related to clinical chemistry and molecular diagnostics, and the procedures are typically performed in a medical laboratory.
Medical Treatment Type Dimension	This table stores details of the different types of medical treatment a Party has undergone due to illness, accidents, or any medical emergency. Medical treatment means the management and care of a patient to combat disease or disorder.
Party Medical Condition Type Dimension	This table stores the medical condition type details of the Party if that Party is suffering from any health issues. The medical condition types are used to describe the condition of a patient (that is, their clinical status) in a hospital.
	Sample values: TUMORBENIGN, TUMORMALIGNANT, TUMOR, AAA, and so on.
Medical Test Status Dimension	This table stores the medical test status details of a Party.  Sample values: ACKNOWLEDGED, ADD, APPROVED, CANCELLED, COMPLETED, WARNING, and so on.
Medical Test Result Type Dimension	This table stores the medical test result type details.  Sample values: ANEG, APOS, ABNEG, ABPOS, ABNORMAL, AMBER, CLOTTED, and so on.

Logical Dimension Table Name	Dimension Table Description
Medical Test Reference Range Dimension	This table stores details about the medical test reference range codes.  Sample values: MAXVALUE, MINVALUE.
Medical Condition Status Dimension	This table stores the medical condition status details.  Sample values: COMPLETED, ONGOING, PENDING, RECOVERED, and so on.
Medical Condition Cause Type Dimension	This table stores details about the medical condition cause type.  Sample values: ANXIETY, CAFFEINE, FAMDEATH, and so on.
Lab Test Remarks Dimension	This table stores the lab test remarks that are general classification of the remarks.  Sample values: HIGH, LOW, NORMAL.
Laboratory Kit Type Dimension	This table stores the laboratory kit type details. Sample values: BLOOD, BLUR, ORAL, and so on.
Substance Usage Type Dimension	This table stores the substance type details if the Party is in the usage of any substances.
Family Illness Type Dimension	This table stores the family illness type, if the Party has any illness that is connected to his or her family background.  Sample Values: BLOOD PRESSURE, HEART ATTACK, DIABETES.
Disability Reason Dimension	This table stores the disability reason as to why the party is disabled.  Sample values: DTA, FI.
Disability Type Dimension	This table stores the details of the type of disability caused to the Party due to the medical complaints or accidents or family illness.  Sample values: LTC, LTD, STD, STC.
Individual Smoking History Dimension	This table stores the individual smoking history, which indicates the history of tobacco use of a client.  Sample values: CURRENT, NEVER, PRIOR, OTHER, UNKNOWN.

The mapping details for the Party Medical Attributes Dimension tables are given here.

Table 54: The mapping details for the Party Medical Attributes Dimension tables

Map reference number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
477	STG_MEDICAL_TES T_TYPE_MASTER	Stage Medical Test Type Master	DIM_MEDICAL_TEST _TYPE	Medical Test Type Dimension
478	STG_MED_TREATM ENT_TYPE_MASTE R	Stage Medical Treatment Type Master	DIM_MEDICAL_TREA TMENT_TYPE	Medical Treatment Type Dimension
479	STG_PARTY_MED_ CNDN_TYPE_MAST ER	Stage Party Medical Condition Type Master	DIM_PARTY_MEDICA L_CNDTN_TYPE	Party Medical Condition Type Dimension

Map reference number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
482	STG_MEDICAL_TES T_STATUS_MASTE R	Stage Medical Test Status Master	DIM_MEDICAL_TEST _STATUS	Medical Test Status Dimension
563	STG_MED_TEST_RS LT_TYPE_MASTER	Stage Medical Test Result Type Master	DIM_MED_TEST_RES ULT_TYPE	Medical Test Result Type Dimension
564	STG_MED_TEST_RE F_RANGE_MASTER	Stage Medical Test Reference Range Master	DIM_MED_TEST_REF _RANGE	Medical Test Reference Range Dimension
565	STG_MED_CONDTN _STATUS_MASTER	Stage Medical Condition Status Master	DIM_MED_CONDTN_ STATUS	Medical Condition Status Dimension
566	STG_MED_CNDTN_ CAUS_TYPE_MAST ER	Stage Medical Condition Cause Type Master	DIM_MED_CONDTN_ CAUSE_TYPE	Medical Condition Cause Type Dimension
481	STG_LAB_TEST_RE MARKS_MASTER	Stage Lab Test Remarks Master	DIM_LAB_TEST_REM ARKS	Lab Test Remarks Dimension
561	STG_LABORATORY _KIT_TYPE_MASTE R	Stage Laboratory Kit Type Master	DIM_LABORATORY_ KIT_TYPE	Laboratory Kit Type Dimension
480	STG_SUBSTANC_US AGE_TYPE_MASTE R	Stage Substance Usage Type Master	DIM_SUBSTANCE_U SAGE_TYPE	Substance Usage Type Dimension
476	STG_FAMILY_ILLNE SS_TYPE_MASTER	Stage Family Illness Type Master	DIM_FAMILY_ILLNES S_TYPE	Family Illness Type Dimension
473	STG_DISABILITY_RE ASON_MASTER	Stage Disability Reason Master	DIM_DISABILITY_RE ASON	Disability Reason Dimension
474	STG_DISABILITY_TY PE_MASTER	Stage Disability Type Master	DIM_DISABILITY_TY PE	Disability Type Dimension
562	STG_IND_SMOKING _HISTORY_MASTER	Stage Individual Smoking History Master	DIM_IND_SMOKING_ HISTORY	Individual Smoking History Dimension

#### 16.6.2 **About Party Medical Attributes T2T (Result Tables)**

Party Medical Attributes T2Ts and their description are given here.

NOTE The Claim Identifier column is added to the tables

> FCT\_PARTY\_MEDICAL\_CONDITN\_DTLS, FCT\_PARTY\_MEDICAL\_TREATMENTS, and FCT\_PARTY\_DISABILITY\_DETAILS to link the Party Medical attributes to the Insurance Claims.

Table 55: Party Medical Attributes T2Ts and their description

T2T Name	T2T Description
T2T_FCT_MEDICAL_TEST_DETAILS	This T2T stores the medical test details of a Party.
T2T_FCT_PARTY_SUBS_USAGE_DTLS	This T2T stores the substance usage details of a Party, if the party is in the usage of any of the tobacco, alcohol, or harmful substance that leads to the medical complaints or conditions.
T2T_FCT_PARTY_FAMILY_MEDICAL_DA	This T2T stores the family medical data of a Party. The data is about the medical history of the family members if any specific illness is present among most of the members.
T2T_FCT_PARTY_MDCAL_CONDITN_DTL	This T2T stores the medical inquiry details or medical condition details of a Party on a given date. These are the details from the questionnaire asked by insurance agents mostly at the time of underwriting or deemed necessary during the life of the policy as per policy terms and conditions.
T2T_FCT_PARTY_MEDICAL_TREATMENT	This T2T stores the medical treatment details of a Party, which informs if the Party is either undergoing or has undergone any medical treatment due to any medical conditions or accidents or family illness.
T2T_FCT_PARTY_DISABILITY_DETL	This T2T stores the Party disability details.

The mapping details for the Party Medical Attributes T2T is given here.

Table 56: The mapping details for the Party Medical Attributes T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_MEDICAL_T EST_DETAILS	Stage Medical Test Details	FCT_MEDICAL_TES T_DETAILS	Fact Medical Test Details	T2T_FCT_MEDICAL_TES T_DETAILS
STG_PARTY_SUB STANCE_USAGE_ DTLS	Stage Party Substance Usage Details	FCT_PARTY_SUBST ANCE_USAGE_DTLS	Fact Party Substance Usage Details	T2T_FCT_PARTY_SUBS_ USAGE_DTLS
STG_PARTY_FAM ILY_MEDICAL_DA TA	Stage Party Family Medical Data	FCT_PARTY_FAMIL Y_MEDICAL_DATA	Fact Party Family Medical Data	T2T_FCT_PARTY_FAMIL Y_MEDICAL_DA
STG_PARTY_MED ICAL_CONDITN_D TLS	Stage Party Medical Condition Details	FCT_PARTY_MEDIC AL_CONDITN_DTLS	Fact Party Medical Condition Details	T2T_FCT_PARTY_MDCA L_CONDITN_DTL
STG_PARTY_MED ICAL_TRTMNTS_ DTLS	Stage Party Medical Treatments Details	FCT_PARTY_MEDIC AL_TREATMENTS	Fact Party Medical Treatments Details	T2T_FCT_PARTY_MEDIC AL_TREATMENT
STG_PARTY_DISA BILITY_DETAILS	Stage Party Disability Details	FCT_PARTY_DISABI LITY_DETAILS	Fact Party Disability Details	T2T_FCT_PARTY_DISABI LITY_DETL

# 16.7 Party Financial Data or Employment Attributes Tables

Party Financial Data or Employment Attributes contain details related to the profession of a Party.

# 16.7.1 About Party Financial Data or Employment Attributes Dimension Tables

Party Financial Data or Employment Attributes Dimension table names and their description are given here

Table 57: Party Financial Data or Employment Attributes Dimension table names and their description

Logical Dimension Table Name	Dimension Tables Description
Profession Dimension	This table stores the master list of all customer professions.
Profession Sub Type Dimension	This table stores the profession subtype.
	Sample value: Orthodontist.

The mapping details for the Party Financial Data or Employment Attributes Dimension tables are given here.

Table 58: The mapping details for the Party Financial Data or Employment Attributes Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
334	STG_PROFESSION_M ASTER	Stage Profession Master	DIM_PROFESSION	Profession Dimension
676	STG_PROFESSION_SU B_TYPE_MASTER	Stage Profession Sub Type Master	DIM_PROFESSION_S UB_TYPE	Profession Sub Type Dimension

# 16.7.2 About Party Financial Data or Employment Attributes T2T (Result Table)

Party Financial Data or Employment Attributes T2T and its description is given here.

Table 59: Party Financial Data or Employment Attributes T2T and its description

T2T Name	T2T Description
T2T_FCT_PARTY_EMPLOYMENT_DETAILS	This T2T stores the employment details of an individual Party. This data applies only to Parties who are individuals. A single Party may consist of multiple employment details.

The mapping details for the Party Financial Data or Employment Attributes T2T is given here.

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_EMPL	Stage Party	FCT_PARTY_EMPL	Fact Party	T2T_FCT_PARTY_EMP
OYMENT_DETAILS	Employment Details	OYMENT_DETAILS	Employment Details	LOYMENT_DETAILS

Table 60: The mapping details for the Party Financial Data or Employment Attributes T2T

# 16.8 Party Producer Exam, Certification, and License Tables

An Insurance Producer (also called an agent or insurance broker) means any person (individual, corporation, association, partnership, and so on) who or which is licensed to solicit, negotiate, or sell insurance. There are different categories of insurance and a producer must be licensed in each category he or she wishes to transact business.

Purpose of the Party Producer Exam, Certification, and License tables is to assess the eligibility of the Producer by evaluating the type of exam and its results, certifications completed, and license obtained by the Producer.

# 16.8.1 About Party Producer Exam, Certification, and License Dimension Tables

Party Producer Exam, Certification, and License Dimension table names and their description are given here.

Table 61: Party Producer Exam, Certification, and License Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Producer Dimension	This table stores producer details.
Producer Status Dimension	This table stores the Producer status if the Party is a Producer.
Producer Agent Dimension	This table stores producer details who is an insurance agent.
Examination Dimension	This table stores the static fields of the Examination. An Exam is formal verification or validation of information learned or known, typically used to satisfy a requirement for licenses, registrations, or other firm education proof.
Exam Type Dimension	This table stores the exam type. Sample values: CEGP, LLQPB.
Insurance Exam Status Dimension	This table stores the status of the insurance license exam attempted by the Party.
Certification Dimension	This table stores the static fields of the Certification. Certification is a formal procedure by which an accredited or authorized person or agency assesses and verifies (and attests in writing by issuing a certificate) the attributes, characteristics, quality, qualification, or status of individuals or organizations, goods or services, procedures or processes, or events or situations, in accordance with established requirements or standards.

Logical Dimension Table Name	Dimension Table Description
Insurance License Dimension	This table stores the license related details of the Party as declared by the respective authorities of the insurance institutions. Here, license refers to the certificate or the document itself that confers permission to engage in insurance activity.
Insurance License Class Type Dimension	This table stores the Insurance License Class Type. Sample values: AGNCY, INDPART.
Insurance License Status Dimension	This table contains the license status of the Party who has applied for a license or who has given the exam.

The mapping details for the Party Producer Exam, Certification, and License Dimension tables are given here.

Table 62: The mapping details for the Party Producer Exam, Certification, and License Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
412	VW_STG_PARTY_M ASTER_PRODUCER	Stage Party Master Producer View	DIM_PRODUCER	Producer Dimension
413	VW_STG_PARTY_M ASTER_PROD_AGE NT	Stage Party Master Producer Agent View	DIM_PRODUCER_A GENT	Producer Agent Dimension
559	STG_PRODUCER_ST ATUS_MASTER	Stage Producer Status Master	DIM_PRODUCER_ST ATUS	Producer Status Dimension
475	STG_CERTIFICATIO N_MASTER	Stage Certification Master	DIM_CERTIFICATIO N	Certification Dimension
554	STG_EXAMINATION _MASTER	Stage Examination Master	DIM_EXAMINATION	Examination Dimension
560	STG_EXAM_TYPE_ MASTER	Stage Exam Type Master	DIM_EXAM_TYPE	Exam Type Dimension
555	STG_INS_EXAM_ST ATUS_MASTER	Stage Insurance Exam Status Master	DIM_INS_EXAM_ST ATUS	Insurance Exam Status Dimension
557	STG_INSURANCE_LI CENSE_MASTER	Stage Insurance License Master	DIM_INSURANCE_LI CENSE	Insurance License Dimension
556	STG_INS_LICENS_C LS_TYPE_MASTER	Stage Insurance License Class Type Master	DIM_INS_LICENSE_ CLASS_TYPE	Insurance License Class Type Dimension
558	STG_INS_LICENSE_ STATUS_MASTER	Stage Insurance License Status Master	DIM_INSURANCE_LI CENSE_STATUS	Insurance License Status Dimension

# 16.8.2 About Party Producer Exam, Certification, and License T2T (Result Tables)

Party Producer Exam, Certification, and License T2T names and their description are given here.

Table 63: Party Producer Exam, Certification, and License T2T names and their description

T2T Name	T2T Description
T2T_FCT_PARTY_EXAM_DETAILS	This T2T stores the details pertaining to the certification and related exams of the Party. An Exam is formal verification or validation of information learned or known, typically used to satisfy a requirement for licenses, registrations, or other firm education proof.
T2T_FCT_PARTY_CERTIFICATE_DTLS	This T2T stores the certification details of the Party. Certification is a formal procedure by which an accredited or authorized person or agency assesses and verifies (and attests in writing by issuing a certificate) the attributes, characteristics, quality, qualification, or status of individuals or organizations, goods or services, procedures or processes, or events or situations, in accordance with established requirements or standards. In the case of insurance, this refers to insurance licentiate and other accreditations.
T2T_FCT_PRDR_AGENT_LICENSE_DETAILS	This T2T stores the Producer License Details of the Party. There are different categories of insurance and a producer must be licensed in each category he or she wishes to transact business.

The mapping details for the Party Producer Exam, Certification, and License T2Ts are given here.

Table 64: The mapping details for the Party Producer Exam, Certification, and License T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_EXAM _DETAILS	Stage Party Exam Details	FCT_PARTY_EXAM_ DETAILS	Fact Party Exam Details	T2T_FCT_PARTY_EXA M_DETAILS
STG_PARTY_CERTI FICATE_DTLS	Stage Party Certificate Details	FCT_PARTY_CERTIFI CATE_DTLS	Fact Party Certificate Details	T2T_FCT_PARTY_CER TIFICATE_DTLS
STG_PRDR_AGENT _LICENSE_DETAIL S	Stage Producer Agent License Details	FCT_PRDR_AGENT_L ICENSE_DETAILS	Fact Producer Agent License Details	T2T_FCT_PRDR_AGEN T_LICENSE_DETAILS

### 16.9 Party Results Tables

Party Results consist of the details related to Party such as Annual Income, and Primary Source of Wealth, and so on.

### 16.9.1 About Party Results Dimension Tables

Party Results Dimension table names and their description are given here.

Table 65: Party Results Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Customer Type Dimension	This table stores the master list of customer type details. Sample values: OUR, OTH.
Credit Rating Dimension	This table stores credit rating information.

The mapping details for the Party Results Dimension tables are given here.

Table 66: The mapping details for the Party Results Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
418	STG_PARTY_TYPE_	Stage Party Type	DIM_CUSTOMER_TYP	Customer Type
	MASTER	Master	E	Dimension
466	STG_CREDIT_RATIN G_MASTER	Stage Credit Rating Master	DIM_CREDIT_RATING	Credit Rating Dimension

#### 16.9.2 **About Party Results T2T (Result Table)**

Party Results T2T and its description is given here.

Table 67: Party Results T2T and its description

T2T Name	T2T Description
T2T_FCT_PARTY_DETAILS	This T2T stores information related to Party such as Annual Income, and Primary Source of Wealth, and so on.

The mapping details for the Party Results T2T is given here.

Table 68: The mapping details for the Party Results T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_DE TAILS	Stage Party Details	FCT_PARTY_DETAILS	Fact Party Details	T2T_FCT_PARTY_DETAIL S

#### 16.10 **Other Party Attributes Tables**

This section consists of details about other Party attribute tables.

## 16.10.1 About Other Party Attributes Dimension Tables

Other Party Attributes Dimension table names and their description are given here.

Table 69: Other Party Attributes Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Party Type Dimension	This table stores Party type information. The Party may be an individual, Corporate - Small, Corporate - Medium, State Government, Sovereign, and so on.
Party Relationship Type Dimension	This table stores the relationship types defined by the Insurance Company. This table is used to determine the relationship type between two Parties. This can also be used for relationship type between an entity and a Party.
Relation Role Type Dimension	This table stores the Relation Role type details.  Sample values: ORIGINATOR, PERFORMER, RECIPIENT, TARGET, and so on.
Reinsurer Type Dimension	This table stores the list of types of reinsurers and is generated from the stage party type master which holds all the party types in one place.

The mapping details for the Other Party Attributes Dimension tables are given here.

Table 70: The mapping details for the Other Party Attributes Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
180	STG_PARTY_TYPE _MASTER	Stage Party Type Master	DIM_PARTY_TYPE	Party Type Dimension
382	STG_PARTY_RELT NSHP_TYPE_MAS TER	Stage Party Relationship Type Master	DIM_PARTY_RELATI ONSHIP_TYPE	Party Relationship Type Dimension
483	STG_RELATION_R OLE_TYPE_MASTE R	Stage Relation Role Type Master	DIM_RELATION_ROL E_TYPE	Relation Role Type Dimension
597	STG_REINSURER_T YPE_MASTER	Stage Reinsurer Type Master	DIM_REINSURER_TY PE	Reinsurer Type Dimension

# 16.10.2 About Other Party Attributes T2Ts (Result Tables)

Other Party Attributes T2Ts and their description is given here.

Table 71: Other Party Attributes T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PARTY_DETAILS	This T2T stores the details pertaining to a Party.
T2T_FCT_PARTY_PARTY_RELATIONS HIP	This T2T stores the details about the relationship between the Parties.
T2T_FCT_PARTY_RATING_DETAILS	This T2T stores the rating details of the customer or counterparty or guarantor, and so on.
T2T_FCT_PARTY_ACCOUNT_ROLE_M AP	This T2T stores the details of the role played by the Party against an account.
T2T_FCT_ACCOUNT_RATING_DETAIL S	This T2T stores the account rating details from multiple sources.

The mapping details for the Other Party Attributes T2Ts is given here.

Table 72: The mapping details for the Other Party Attributes T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_DETA ILS	Stage Party Details	FCT_PARTY_DETAI LS	Fact Party Details	T2T_FCT_PARTY_DET AILS
STG_PARTY_PART	Stage Party Party	FCT_PARTY_PARTY	Fact Party Party	T2T_FCT_PARTY_PAR TY_RELATIONSHIP
Y_RELATIONSHIP	Relationship	_RELATIONSHIP	Relationship	
STG_PARTY_RATI	Stage Party Rating	FCT_PARTY_RATIN	Fact Party Rating	T2T_FCT_PARTY_RAT ING_DETAILS
NG_DETAILS	Details	G_DETAILS	Details	
STG_PARTY_ACCO	Stage Party	FCT_PARTY_ACCO	Fact Party Account	T2T_FCT_PARTY_ACC
UNT_ROLE_MAP	Account Role Map	UNT_ROLE_MAP	Role Map	OUNT_ROLE_MAP
STG_ACCOUNT_R	Stage Account	FCT_ACCOUNT_RA	Fact Account Rating	T2T_FCT_ACCOUNT_
ATING_DETAILS	Rating Details	TING_DETAILS	Details	RATING_DETAILS

#### 16.11 **Deploying Party Related Tables on Hive**

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

NOTE

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

# 16.12 Populating Party Related Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- **1.** To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status of the SCD Batch">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 16.13 Populating Party Related T2Ts (Result Tables)

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. <u>Prerequisites for loading T2T</u>.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# 16.14 Related Topics

You can see the following topics related to other function-specific tables:

- Insurance Underwriting Entities
- Insurance Contracts Tables
- Insurance Claims Tables

# 17 Product Tables

This section provides information about Product tables in the Oracle Insurance Data Foundation application.

#### **Topics:**

- About Product Dimension Table
- <u>Deploying Product Tables on Hive</u>
- Populating Product Dimension Tables
- Related Topics

Product tables are used to load the product details that the customer has opted for.

# 17.1 About Product Dimension Tables

Product Dimension table names and their description are given here.

Table 73: Product Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Product Dimension	This table stores the details of all the products (existing and stopped) offered by the Insurance Company.
Product Category Dimension	This table stores details about the loan product category.
Product Type Dimension	This table stores details about loan product type.
Product Feature Dimension	This table stores the product feature details.

The mapping details for the Product Dimension tables are given here.

Table 74: The mapping details for the Product Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table	Logical Dimension Table Name
78	STG_PRODUCT_MAS TER	Stage Product Master	DIM_PRODUCT	Product Dimension
83	STG_PRODUCT_CAT EGORY_MASTER	Stage Product Category Master	DIM_PRODUCT_CA TEGORY	Product Category Dimension
85	STG_PRODUCT_TYP E_MASTER	Stage Product Type Master	DIM_PRODUCT_TY PE	Product Type Dimension
128	DIM_PRODUCT_V	Product Dimension View	DIM_PRODUCT	Product Dimension
151	STG_PRODUCT_FEA TURE_MASTER	Stage Product Feature Master	DIM_PRODUCT_FE ATURE	Product Feature Dimension

NOTE

The FSI\_PROD\_STD\_PROD\_TYPE\_MAP table has been added for mapping purposes if the customer so desires. This table stores Product Standard Product Type mapping details.

## 17.2 Deploying Product Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.</u>

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 17.3 Populating Product Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 17.4 Related Topics

You can see the following topics related to other function-specific tables:

- Insurance Underwriting Entities
- Insurance Contracts Tables

#### **Insurance Underwriting Entities** 18

This section provides information about Insurance Underwriting entities in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

#### **Topics:**

- **Insurance Underwriting Application Tables**
- **Insurance Underwriting Quotes Tables**
- **Insurance Underwriting Tables for Risk Analysis**
- **Producer and Producer Agreement Tables**
- <u>Deploying Insurance Underwriting Tables on Hive</u>
- Populating Insurance Underwriting Dimension Tables
- Populating Insurance Underwriting T2T Result Tables
- **Related Topics**

Insurance Underwriting describes the process of assessing risk, ensuring that the cost of the cover is proportionate to the risks faced by the Party or the organization concerned. It evaluates risk and exposures of potential Party or organizations. Insurance Company decides the coverage the Party or organization must receive, and the premium associated with the coverage or whether to accept the risk and insure them.

This is the conceptual model of Underwriting policies.

**Conceptual Model of Underwriting Policies** OIDF Common Individual Life, Annuity, Health **Property and Casualty Underwriting Risk** Insurance Insurance **Elements Party Definition Party Financial Details Party Medical** Party Life Style Activities Party Driving Violation **Party Crime** Party Employment **Party Identification Historical Claims Underwriting Product** Quotes Class Guidelines Data

Figure 88: The conceptual model of the Underwriting policies

# 18.1 Insurance Underwriting Application Tables

When an applicant applies for insurance, the Insurance Company must look at different criteria to decide if they are going to accept the application for coverage. As a result, the Insurance Company creates and documents detailed information about the applicant and this process is called Underwriting Application.

# 18.1.1 About Insurance Underwriting Application Dimension Tables

Insurance Underwriting Application Dimension table names and their descriptions are given here.

Table 75: Insurance Underwriting Application Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description
Underwriting Product Class Dimension	This table stores the identification details of the underwriting class and its respective name or names. Underwriting class is

Logical Dimension Table Name	Dimension Table Description
	carrier-specific nomenclature representing the underwriting groups or products or risks in a given organization.
Application Dimension	This table stores the underwriting application details.
Application Type Dimension	This table stores the application type details such as fresh, existing, and enhancements.
Application Group Dimension	This table stores the underwriting application group details. The application group can contain one or more applications.
Application Status Dimension	This table stores the master list of application statuses such as processing, canceled by the customer, outstanding, outstanding from restructuring, and so on.
Document Submission Status Dimension	This table stores the list of several statuses that a document can have. The document once submitted to an Insurance Company contains different statuses such as Pending, Received, Mailed for approval, Received Back, Under Processing, Approved, and so on.
Rejection Reason Dimension	This table stores all the rejection reasons given by prospects for not buying a product or service.
Application Reject Reasons Dimension	This table stores the list of rejection reasons possible when processing an application.
Application Decision Event Dimension	This table stores the details of the outcome of all decision events for the individual application. During the process of underwriting, an application goes through several stages such as personal identity verification, address verification, employment verification, and so on.
Underwriting Model Type Dimension	This table stores the list of all types of underwriting model types.
Underwriting Element Dimension	This table stores the classification details of insurance policy underwriting related to tobacco usage.  Sample values: BLENDED, NONSMOKER, SMOKER, TOBACCO, and so on.
Insurance Underwriting Issue Type Dimension	This table stores the Insurance Underwriting issue type details for a policy. For example, Full Underwriting, Mass Underwriting, Reduced Underwriting, Simplified Underwriting, and so on.  Sample values: OTHER, UNKNOWN, AVIATION, PERCOVERAGE, and so on.
Insurance Underwriting Issue Sub Type Dimension	This table stores the Insurance Underwriting issue sub type details for a policy. This table provides additional details about the type of underwriting that was applied to the coverage.  Sample values: OTHER, UNKNOWN, FULLMED, NONMED, PARAMED.
Dimension Claim Refusal Reason	Stores the list of all the reasons for which a claim can be refused by the entity.
Claim Referral Reason Dimension	Stores different referral reasons for a claim.

The mapping details for the Insurance Underwriting Application Dimension tables are given here.

Table 76: The mapping details for the Insurance Underwriting Application Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
523	STG_UNW_PRODUC T_CLASS_MASTER	Stage Underwriting Product Class Master	DIM_UNW_PRODUC T_CLASS	Underwriting Product Class Dimension
664	STG_APPLICATIONS	Stage Applications	DIM_APPLICATION	Application Dimension
162	STG_APPL_TYPE_M ASTER	Stage Application Type Master	DIM_APPLICATION_ TYPE	Application Type Dimension
665	STG_APPLICATION_ GROUP_MASTER	Stage Application Group Master	DIM_APPLICATION_ GROUP	Application Group Dimension
166	STG_APPL_STATUS _MASTER	Stage Application Status Master	DIM_APPLICATION_S TATUS	Application Status Dimension
673	STG_DOC_SUBMISS N_STATUS_MASTE R	Stage Document Submission Status Master	DIM_DOC_SUBMISSI ON_STATUS	Document Submission Status Dimension
93	STG_REJECTION_R EASON_MASTER	Stage Rejection Reason Master	DIM_REJECTION_RE ASON	Rejection Reason Dimension
3	STG_APPL_REJECT _REASON_MASTER	Stage Application Reject Reasons Master	DIM_APPLICATION_ REJECT_REASONS	Application Reject Reasons Dimension
666	STG_APPLN_DECISI ON_EVNT_MASTER	Stage Application Decision Event Master	DIM_APPLN_DECISIO N_EVNT	Application Decision Event Dimension
409	STG_UNDRWRTNG_ MDL_TYPE_MASTE R	Stage Underwriting Model Type Master	DIM_UNDERWRITING _MODEL_TYPE	Underwriting Model Type Dimension
522	STG_UNDERWRITIN G_ELMNT_MASTER	Stage Underwriting Element Master	DIM_UNDERWRITING _ELEMENT	Underwriting Element Dimension
238	STG_UNDERWRITE R_MASTER	Stage Underwriter Master	DIM_UNDERWRITER	Underwriter Dimension
725	STG_INS_UNW_ISS UE_TYPE_MASTER	Stage Insurance Underwriting Issue Type Master	DIM_INS_UNW_ISSU E_TYPE	Insurance Underwriting Issue Type Dimension
726	STG_INS_UNW_ISS UE_STYPE_MASTER	Stage Insurance Underwriting Issue Sub Type Master	DIM_INS_UNW_ISSU E_STYPE	Insurance Underwriting Issue Sub Type Dimension
233	STG_CLAIM_REFUS AL_REAS_MASTER	Stage Claim Refusal Reason Master	DIM_CLAIM_REFUSA L_REASON	Dimension Claim Refusal Reason
242	STG_CLAIM_REFER RAL_REAS_MASTER	Stage Claim Referral Reason	DIM_CLAIM_REFERR AL_REASON	Claim Referral Reason Dimension

#### **About Insurance Underwriting Application T2Ts (Result Tables) 18.1.2**

Insurance Underwriting Application T2Ts and their description are given here.

Table 77: Insurance Underwriting Application T2Ts and their description

T2T Name	T2T Description
T2T_FCT_APPLICATION	This T2T stores the applications processed in each period, for analysis over time.
T2T_FCT_APPLICATION_GROUP	This T2T stores the Application Group details. The application group can consist of one or more applications. In general, the insurance underwriting team creates an application group.
T2T_FCT_APPLICATION_DOCUMENT	This T2T stores the documents submitted by the applicant. Underwriters may ask multiple verification documents from those who seek to cover the risk with the insurance companies. All such documentary evidence is stored in this entity.
T2T_FCT_APPLICATION_DOC_MAP	This T2T stores the details of the document associated with the application and the status of the document such as a document is approved or rejected.
T2T_FCT_APPLICATION_EVENT_DEC	This T2T stores details of the outcome of all decision events for the individual application. During the process of underwriting, an application goes through several stages such as personal identity verification, address verification, employment verification, and so on.
T2T_FCT_APPLICATIONS_DEVIATION	This T2T stores the application deviation details.
T2T_FCT_APPLICNS_DOC_PRINT_LOG	This T2T stores the history of documents printed at origination.  Multiple documents can be printed for the loan at origination.
T2T_FCT_APPLN_GROUP_EVENT_DEC	This T2T stores details of the outcome of all decision events for an Application Group. During the process of underwriting, an application goes through several stages like personal identity verification, address verification, employment verification, and so on.
T2T_FCT_APPLN_PARTY_ROLE_MAP	This T2T stores mapping details of an application to multiple roles played by a party. A party can be a primary applicant, coapplicant, Guarantor, Nominee, and so on.
T2T_FCT_EXTERNAL_INS_REFUSAL_DTLS	Stores the external insurance refusal details of the Party or the Applicant if any other carrier has refused this Applicant or Party.
T2T_FCT_PRIOR_INSURER_CLAIM_DTLS	Stores the prior insurer claim details of the Applicant or the Party.

The mapping details for the Insurance Underwriting Application T2Ts are given here.

Table 78: The mapping details for the Insurance Underwriting Application T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_APPLICATIO NS	Stage Applications	FCT_APPLICATION	Fact Applications	T2T_FCT_APPLICATION
STG_APPLICATIO N_GROUP	Stage Application Group	FCT_APPLICATION _GROUP	Fact Application Group	T2T_FCT_APPLICATION_G ROUP
STG_APPLICATIO N_DOCUMENT	Stage Application Document	FCT_APPLICATION _DOCUMENT	Fact Application Document	T2T_FCT_APPLICATION_D OCUMENT
STG_APPLICATIO N_DOCUMENT_M AP	Stage Application Document Map	FCT_APPLICATION _DOCUMENT_MA P	Fact Application Document Map	T2T_FCT_APPLICATION_D OC_MAP
STG_APPLICATIO N_EVENT_DECISI ON	Stage Application Event Decision	FCT_APPLICATION _EVENT_DECISION	Fact Application Event Decision	T2T_FCT_APPLICATION_E VENT_DEC
STG_APPLICATIO NS_DEVIATION	Stage Applications Deviation	FCT_APPLICATION S_DEVIATION	Fact Applications Deviation	T2T_FCT_APPLICATIONS_ DEVIATION
STG_APPLICATIO NS_DOC_PRINT_ LOG	Stage Applications Document Print Log	FCT_APPLICATION S_DOC_PRINT_LO G	Fact Applications Document Print Log	T2T_FCT_APPLICNS_DOC_ PRINT_LOG
STG_APPLN_GRO UP_EVENT_DECIS ION	Stage Application Group Event Decision	FCT_APPLN_GRO UP_EVENT_DECISI ON	Fact Application Group Event Decision	T2T_FCT_APPLN_GROUP_ EVENT_DEC
STG_APPLN_PAR TY_ROLE_MAP	Stage Application Party Role Map	FCT_APPLN_PART Y_ROLE_MAP	Fact Application Party Role Map	T2T_FCT_APPLN_PARTY_ ROLE_MAP
STG_EXTERNAL_I NS_REFUSAL_DT LS	Stage External Insurance Refusal Details	FCT_EXTERNAL_I NS_REFUSAL_DTL S	Fact External Insurance Refusal Details	T2T_FCT_EXTERNAL_INS_ REFUSAL_DTLS
STG_PRIOR_INSU RER_CLAIM_DTL S	Stage Prior Insurer Claim Details	FCT_PRIOR_INSUR ER_CLAIM_DTLS	Fact Prior Insurer Claim Details	T2T_FCT_PRIOR_INSURER _CLAIM_DTLS

# **18.2** Insurance Underwriting Quotes Tables

An insurance quote is an estimate of what an applicant's rate can be with a potential Insurance Company. Quotes are subject to change depending on how much information an applicant gives at the time of the quote. The more forthcoming an applicant is with information, the more accurate is their insurance quote.

# **18.2.1** About Insurance Underwriting Quotes Dimension Tables

Insurance Underwriting Quotes Dimension table names and their descriptions are given here.

Table 79: Insurance Underwriting Quotes Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description
Quote Source Dimension	This table stores the description of the source of the quote.  For example, Producing Agency, Producing Agent, Customer, and so on.
Quote Source Method Dimension	This table stores the description of the source method of the quotes.  For example, Turbo rater, quick quote, and so on.
Quote Submission Method Dimension	This table stores details of different methods from which the Insurance Company receives the quote.  For example, mail, fax, internet, and so on.
Quote Declination Type Dimension	This table stores all types of quote declinations.  For example, Rates too high, Billing Plan, Fraud and Bankruptcy, Uninsurable Risks, Age of Building, and so on.

The mapping details for the Insurance Underwriting Quotes Dimension tables are given here.

Table 80: The mapping details for the Insurance Underwriting Quotes Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
251	STG_QUOTE_SOUR CE	Stage Quote Source	DIM_QUOTE_SOUR CE	Quote Source Dimension
252	STG_QUOTE_SOUR	Stage Quote Source	DIM_QUOTE_SOUR	Quote Source
	CE_METHOD	Method	CE_METHOD	Method Dimension
253	STG_QUOTE_SUBM	Stage Quote	DIM_QUOTE_SUBMI	Quote Submission
	ISSION_METHOD	Submission Method	SSION_METHOD	Method Dimension
250	STG_QUOTE_DECLI	Stage Quote	DIM_QUOTE_DECLI	Quote Declination
	NATION_TYPE	Declination Type	NATION_TYPE	Type Dimension

# **18.2.2** About Insurance Underwriting Quotes T2Ts (Result Tables)

Insurance Underwriting Quotes T2Ts and their description are given here.

Table 81: Insurance Underwriting Quotes T2Ts and their description

T2T Name	T2T Description
T2T_FCT_INSURANCE_QUOTES	This T2T stores all the quote related attributes and measures.
T2T_FCT_INSURANCE_QUOTE_REPORTS	This T2T stores report related information for each quote.

The mapping details for the Insurance Underwriting Quotes T2Ts are given here.

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INSURANCE_Q	Stage Insurance	FCT_INSURANCE_Q	Fact Insurance	T2T_FCT_INSURANCE_Q
UOTES	Quotes	UOTES	Quotes	UOTES
STG_INSURANCE_Q	Stage Insurance	FCT_INSURANCE_Q	Fact Insurance	T2T_FCT_INSURANCE_Q
UOTE_REPORTS	Quote Reports	UOTES_REPORTS	Quote Reports	UOTE_REPORTS

Table 82: The mapping details for the Insurance Underwriting Quotes T2Ts

# 18.3 Insurance Underwriting Tables for Risk Analysis

Insurance Company determines and assesses the risk for itself when offering insurance to an insurer through the Underwriting process. Lesser the risk, lesser the cost to an insurer.

#### **Topics:**

- About Insurance Underwriting Dimension Tables for Risk Analysis
- About Insurance Underwriting T2T (Result Table) for Risk Analysis
- Party Criminal Conviction Tables
- Party Driving Violation Tables
- Party Lifestyle Activity Tables

# 18.3.1 About Insurance Underwriting Dimension Tables for Risk Analysis

Underwriting Dimension table names (for Risk Analysis) and their descriptions are given here.

Table 83: Underwriting Dimension table names (for Risk Analysis) and their descriptions

Logical Dimension Table Name	Dimension Table Description
Underwriting Risk Sub Type Dimension	This table stores the underwriting sub risk type. Sample values: Preferred, Rated, Substandard, Standard, Uninsurable, and so on.
Underwriting Risk Type Dimension	This table stores the underwriting risk type.  Sample values: best, better, worse, worst, other, unknown.
Underwriting Rating Class Dimension	Stores the underwriting class code details. The source of this list includes several bureaus, insurers, and other state manuals or rating organization. The National Council on Compensation Insurance (NCCI) for Workers' Compensation state-specific manuals or other state rating organizations are the source of this code list.
	Sample values: 8010, 8018, 8008, 8044, 9083, and so on.

The mapping details for the Underwriting Dimension tables (for Risk Analysis) are given here.

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
524	STG_UNW_RISK_SU	Stage Underwriting	DIM_UNW_RISK_SU	Underwriting Risk Sub
	B_TYPE_MASTER	Risk Sub Type Master	B_TYPE	Type Dimension
525	STG_UNW_RISK_TY	Stage Underwriting	DIM_UNW_RISK_TY	Underwriting Risk
	PE_MASTER	Risk Type Master	PE	Type Dimension
785	STG_UNW_RATING_	Stage Underwriting	DIM_UNW_RATING_	Underwriting Rating
	CLASS_MASTER	Rating Class Master	CLASS	Class Dimension

Table 84: The mapping details for the Underwriting Dimension tables (for Risk Analysis)

# 18.3.2 About Insurance Underwriting T2T (Result Table) for Risk Analysis

Insurance Underwriting T2T and its description are given here.

Table 85: Insurance Underwriting T2T and its description

T2T Name	T2T Description
T2T_FCT_UNW_PRODUCT_CLASS_DETAILS	This T2T stores the underwriting class product details. It provides life products allowed issue limitations based on the underwriting risk properties including gender, age, tobacco usage, underwriting class, and face or coverage amount.

The mapping details for the Insurance Underwriting T2T table is given here

Table 86: The mapping details for the Insurance Underwriting T2T table

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_UNW_PROD UCT_CLASS_DET AILS	Stage Underwriting Product Class Details	FCT_UNW_PRODUC T_CLASS_DETAILS	Fact Underwriting Product Class Details	T2T_FCT_UNW_PRO DUCT_CLASS_DETAI LS

## **18.3.3** Party Criminal Conviction Tables

Party Criminal Conviction is the outcome of a criminal prosecution, which concludes in a judgment that the defendant is guilty of the crime(s) charged.

### 18.3.3.1 About Party Criminal Conviction Dimension Table

Party Criminal Conviction Dimension table name and its description are given here.

Table 87: Party Criminal Conviction Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Crime Type Dimension	This table stores the crime type if the Party is involved in any criminal activity.

The mapping details for the Party Criminal Conviction Dimension table is given here.

Table 88: The mapping details for the Party Criminal Conviction Dimension table

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
550	STG_CRIME_TYPE_ MASTER	Stage Crime Type Master	DIM_CRIME_TYPE	Crime Type Dimension

#### **18.3.3.2** About Party Criminal Conviction T2T (Result Table)

Party Criminal Conviction T2T and its description is given here.

Table 89: Party Criminal Conviction T2T and its description

T2T Name	T2T Description
T2T_FCT_CRIMINAL_CONVICTION_DTLS	This T2T stores the criminal conviction details if the Party is involved in any criminal activity.

The mapping details for the Party Criminal Conviction T2T is given here.

Table 90: The mapping details for the Party Criminal Conviction T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CRIMINAL_C ONVICTION_DTL S	Stage Criminal Conviction Details	FCT_CRIMINAL_CO NVICTION_DTLS	Fact Criminal Conviction Details	T2T_FCT_CRIMINAL_CO NVICTION_DTLS

#### **Party Driving Violation Tables** 18.3.4

Party Driving Violation is the violation of specific Road and Motor vehicle laws, by the driver (Party) of a vehicle. This information is collected for the purpose of either underwriting or continuing suitable insurance coverage.

#### **About Party Driving Violation Dimension Tables** 18.3.4.1

Party Driving Violation Dimension table names and their descriptions are given here.

Table 91: Party Driving Violation Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description
Driving violation type dimension	This table stores the master list of driving violation types.
Driving Violation Charge Category Dimension	This table stores the driving violation charge category details.  Sample values: Felony, Misdemeanor, Other, Unknown.

The mapping details for the Party Driving Violation Dimension tables are given here.

Table 92: The mapping details for the Party Driving Violation Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
551	STG_DRIVIN_VIOLAT N_TYPE_MASTER	Stage Driving Violation Type Master	DIM_DRIVING_VIOLAT ION_TYPE	Driving Violation Type Dimension
552	STG_DVIOLTN_CHR GE_CTGRY_MASTER	Stage Driving Violation Charge Category Master	DIM_DVIOLTN_CHRG E_CTGRY	Driving Violation Charge Category Dimension

### **18.3.4.2** About Party Driving Violation T2T (Result Table)

Party Driving Violation T2T and its description is given here.

Table 93: Party Driving Violation T2T and its description

T2T Name	T2T Description
T2T_FCT_DRIVING_VIOLATION_DTLS	This T2T stores the driving violation details related to the party identifier.

The mapping details for the Party Driving Violation T2T is given here.

Table 94: The mapping details for the Party Driving Violation T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_DRIVING_VI	Stage Driving	FCT_DRIVING_VIOL	Fact Driving	T2T_FCT_DRIVING_VI
OLATION_DTLS	Violation Details	ATION_DTLS	Violation Details	OLATION_DTLS

#### **Party Lifestyle Activity Tables** 18.3.5

Lifestyle Activity covers physical activities of the Party such as auto racing, aviation, boat racing, mountain climbing, para scuba diving, and many more, which may be considered as risky by the insurance company. The Lifestyle Activity tables store the details of the particular Lifestyle Activities of the Party.

Lifestyle Activity tables can be mainly classified into Lifestyle Activity Details and its specific subcategories.

#### **About Party Lifestyle Activity Dimension Tables** 18.3.5.1

Party Lifestyle Activity Dimension table names and their descriptions are given here.

Table 95: Party Lifestyle Activity Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description
Life Style Activity Type Dimension	This table stores the details of the life style activity type. Sample values: AUTORACE, AVIATION, BOATRACE, BOXING, RUGBY, FORTRAVEL, MILITARY, ROCKCLIMB, DIVE, and so on.
Life Style Activity Dimension	This table stores the details about lifestyle activity of a Party, its start date and end date.
Life Style Activity Violation Dimension	This table stores the information regarding life style activity violation.
Life Style Activity Violation Type Dimension	This table stores the Life Style Activity violation type. Sample values: FAA Equipment violation, license suspension, other.
Life Style Activity Aircraft Type Dimension	This table stores a master list of types of aircraft flown for the activity. Aircraft Type is used to specify the type of aircraft. If all the aircraft are of the same Aircraft Type, then the type must be specified in the Aircraft Type on aviation experience.  Sample vales: bomber, Attack, Experimental, fighter, and so on.
Life Style Activity Air Sports Type Dimension	This table stores the different types of equipment used for the climbing activity. Sample values: Slings, Nuts, Tricams, SLCD=Spring-Loaded camming Devices, Bolts, Pitons, Skyhooks.
Life Style Activity Air Sports Balloon Type Dimension	This table stores the balloon-type used for any air sports experience. Sample values: Air, Gas, Other.
Life Style Activity Aviation Highest Qualification Level Dimension	This table stores the highest qualification level achieved in aviation by the Party. Samples values: Commercial License, Instructors License, Instrument Rated, and so on.
Life Style Activity Aviation Type Dimension	This table stores the Aviation Type details. It is used to specify the type of aviation when it applies to all the aircraft flown by the client. If the Aviation Type varies by Aircraft, then the type must be specified in each individual Aircraft object instead.  Sample values: Commercial, Military, other, private, unknown.
Life Style Activity Aviation Certificate Type Dimension	This table stores the aviation certificate type details. Sample values: single-engine, sea, instrument rating, multiengine, land, other.
Life Style Activity Craft Certificate Type Dimension	This table stores the craft certificate type. Sample values: airplane, glider, lighter than air, other, powered-lift, rotorcraft, unknown.

Logical Dimension Table Name	Dimension Table Description
Life Style Activity Peril Type Dimension	This table stores the Life Style Activity Peril type details. Sample values: Dare-Devil Activities, Exhibitions, Exploration, Other, Unknown, Record Setting Activities, Rescue, Stunts.
Life Style Activity Climbing Type Dimension	This table stores the details of different types of climbing activities. Sample values: traditional, top-rope, sport, lead, bouldering, solo, aid.
Life Style Activity Medical Certificate Restriction Type Dimension	This table stores the details of the medical certificate restriction type defines the types of restrictions or constraints that may apply to a medical certificate.  Sample values: other, restricted, special issue, unknown.
Life Style Activity Military Organization Type Dimension	This table stores the type of military organization the Party is part of. Sample values: air force, army, coast guard, marines, national guards, navy, others.
Life Style Activity Safety Equipment Used Type Dimension	This table stores the details of different types of safety equipment used during the activity.  Sample values: Head and Neck Restraints, Onsite Medical Personnel, Other, Roll Cages, Unknown.
Life Style Activity Equipment Assembly Dimension	This table stores the details of the equipment assembly. Sample values: Factory Assembled, home Assembled, Home build, other.
Life Style Activity Flying Purpose Dimension	This table stores the details of the purpose of flying. Sample values: Advertising, Aerobatics, Agricultural, Combat, Flight surgeon, and so on.
Life Style Activity Climbing Equipment Type Dimension	This table stores the details of different types of equipment used for the climbing activity. Sample values: Slings, Nuts, Tricams, SLCD=Spring-Loaded camming Devices, Bolts, Pitons, Skyhooks.
Life Style Activity Current Military Status Dimension	This table stores the details of the current military status. Sample values: Active Duty, Active Reserve, Inactive, Retired, and so on.
Life Style Activity Race Track Type Dimension	This table stores the details of different race track type. Sample values: Closed Course Inland, Closed Course Ocean, Drag, Hill climb, and so on.
Life Style Activity Racing Vehicle Type Dimension	This table stores the details of the type of racing vehicles. Sample values: Automobile, Boat, Motorcycle, Other, Snowmobile, Unknown.
Life Style Activity Class Of Competition Type Dimension	This table stores the racing competitions class type details. Sublist values, where specified, corresponding to the type of vehicle specified in the Vehicle Type property. Sample Values: Formula 1, Cross country, Dirt track, Hill climbs, Ice racing, and so on.
Life Style Activity Surface Type Dimension	This table stores the surface type details the race was primarily performed on.

Logical Dimension Table Name	Dimension Table Description
	Sample values: Clay, dirt, ice, paved, sand, water, other, unknown.
Life Style Activity Travel Purpose Type Dimension	This table stores the travel type purpose details. Sample values: Business, miscellaneous, Education, Employment, Family Visit, Volunteer Work, and so on.
Life Style Activity Travel Transportation Mode Dimension	This table stores the dominant mode of travel details while in a foreign country.  Sample values: automobile, common carrier air, ship, and so on.
Life Style Activity Underwater Diving Type Dimension	This table stores the diving type details. Samples values: Scuba, skin diving, snorkeling, hookah, hard hat.
Life Style Activity Underwater Dive Training Type Dimension	This table stores the master list of professionally recognized diving certifications and training courses.
Life Style Activity Underwater Dive Location Type Dimension	This table stores the details of dive location type, the environments, which apply to this Underwater Diving experience. Sample values: Coastal Waters, Deep Sea, Lakes, and so on.
Life Style Activity Underwater Dive Purpose Type Dimension	This table stores the underwater dive purpose details. Sample values: Abalone, Cave, Cavern diving, Exploration, Free Diving, and so on.
Life Style Activity Underwater Diving Equipment Type Dimension	This table stores the diving equipment type details. Sample values: closed circuit, wet suit, and so on.
Season Type Dimension	This table stores the season type details. Sample values: fall, other, unknown, spring, summer, winter.
Terrain Type Dimension	This table stores the aviation certificate type details. Sample values: single engine, sea, instrument rating, multi engine, land, other.

The mapping details for the Party Lifestyle Activity Dimension tables are given here.

Table 96: The mapping details for the Party Lifestyle Activity Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
501	STG_LSA_TYPE_ MASTER	Stage Life Style Activity Type Master	DIM_LIFESTYLE_AC TIVITY_TYPE	Life Style Activity Type Dimension
527	STG_LSA_AIRSPO RTS_EXP_DETL_V	Stage Life Style Activity Airsports Experience Details View	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
528	STG_LSA_AVIATI ON_EXP_DETAILS _V	Stage Life Style Activity Aviation Experience Details	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
530	STG_LSA_COMPE TITION_DTLS_V	Stage Life Style Activity Competition Details	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
531	STG_LSA_MILITA RY_EXP_DETAILS _V	Stage Life Style Activity Military Experience Details	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
532	STG_LSA_RACING _EXPRNCE_DTLS_ V	Stage Life Style Activity Racing Experience Details View	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
533	STG_LSA_UW_DI VNG_EXP_DETAIL S_V	Stage Life Style Activity Underwater Diving Experience Details View	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
534	STG_LSA_FORGN _TRVEL_EXP_DTL S_V	Stage Life Style Activity Foreign Travel Experience Details View	DIM_LIFESTYLE_AC TIVITY	Life Style Activity Dimension
502	STG_LSA_VIOLAT ION_MASTER	Stage Life Style Activity Violation Master	DIM_LSA_VIOLATIO N	Life Style Activity Violation Dimension
503	STG_LSA_VIOLAT ION_TYPE_MAST ER	Stage Life Style Activity Violation Type Master	DIM_LSA_VIOLATIO N_TYPE	Life Style Activity Violation Type Dimension
505	STG_LSA_AIRCRA FT_TYPE_MASTE R	Stage Life Style Activity Aircraft Type Master	DIM_LSA_AIRCRAF T_TYPE	Life Style Activity Aircraft Type Dimension
506	STG_LSA_AIRSPO RTS_TYPE_MAST ER	Stage Life Style Activity Air Sports Type Master	DIM_LSA_AIRSPOR TS_TYPE	Life Style Activity Air Sports Type Dimension
507	STG_LSA_AS_BAL LOON_TYPE_MA STER	Stage Life Style Activity Air Sports Balloon Type Master	DIM_LSA_AS_BALL OON_TYPE	Life Style Activity Air Sports Balloon Type Dimension
508	STG_LSA_AVIATI ON_HQL_MASTE R	Stage Life Style Activity Aviation Highest Qualification Level Master	DIM_LSA_AVIATION _HQL	Life Style Activity Aviation Highest Qualification Level Dimension
509	STG_LSA_AVIATI ON_TYPE_MASTE R	Stage Life Style Activity Aviation Type Master	DIM_LSA_AVIATION _TYPE	Life Style Activity Aviation Type Dimension
510	STG_LSA_AVITN_ CRTF_TYPE_MAS TER	Stage Life Style Activity Aviation Certificate Type Master	DIM_LSA_AVIATN_ CERTF_TYPE	Life Style Activity Aviation Certificate Type Dimension
511	STG_LSA_CERT_C RAFT_TYPE_MAS TER	Stage Life Style Activity Craft Certificate Type Master	DIM_LSA_CERT_CR AFT_TYPE	Life Style Activity Craft Certificate Type Dimension
512	STG_LSA_PERIL_ TYPE_MASTER	Stage Life Style Activity Peril Type Master	DIM_LSA_PERIL_TY PE	Life Style Activity Peril Type Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
513	STG_LSA_CLIMBI NG_TYPE_MASTE R	Stage Life Style Activity Climbing Type Master	DIM_LSA_CLIMBING _TYPE	Life Style Activity Climbing Type Dimension
515	STG_LSA_MED_C ERTR_TYPE_MAS TER	Stage Life Style Activity Medical Certificate Restriction Type Master	DIM_LSA_MED_CER TR_TYPE	Life Style Activity Medical Certificate Restriction Type Dimension
516	STG_LSA_MILTRY _ORG_TYPE_MAS TER	Stage Life Style Activity Military Organization Type Master	DIM_LSA_MILITARY _ORG_TYPE	Life Style Activity Military Organization Type Dimension
517	STG_LSA_SAFET Y_EQP_TYPE_MA STER	Stage Life Style Activity Safety Equipment Used Type Master	DIM_LSA_SAFETY_ EQP_TYPE	Life Style Activity Safety Equipment Used Type Dimension
518	STG_LSA_EQUIP MT_ASSMBLY_M ASTER	Stage Life Style Activity Equipment Assembly Master	DIM_LSA_EQUIPME NT_ASSEMBLY	Life Style Activity Equipment Assembly Dimension
519	STG_LSA_FLYING _PURPOSE_MAST ER	Stage Life Style Activity Flying Purpose Master	DIM_LSA_FLYING_P URPOSE	Life Style Activity Flying Purpose Dimension
535	STG_LSA_CLMBN G_EQP_TYPE_MA STER	Stage Life Style Activity Climbing Equipment Type Master	DIM_LSA_CLMBNG_ EQPMNT_TYPE	Life Style Activity Climbing Equipment Type Dimension
536	STG_LSA_CUR_MI LITRY_STS_MAST ER	Stage Life Style Activity Current Military Status Master	DIM_LSA_CUR_MILI TRY_STS	Life Style Activity Current Military Status Dimension
537	STG_LSA_RACE_T RACK_TYPE_MAS TER	Stage Life Style Activity Race Track Type Master	DIM_LSA_RACE_TR ACK_TYPE	Life Style Activity Race Track Type Dimension
538	STG_LSA_RACE_ VHCL_TYPE_MAS TER	Stage Life Style Activity Racing Vehicle Type Master	DIM_LSA_RACE_VH CL_TYPE	Life Style Activity Racing Vehicle Type Dimension
539	STG_LSA_RACN_ CLS_COMPTN_M ASTER	Stage Life Style Activity Class Of Competition Type Master	DIM_LSA_RACN_CL S_OF_COMPTN	Life Style Activity Class Of Competition Type Dimension
540	STG_LSA_SURFA CE_TYPE_MASTE R	Stage Life Style Activity Surface Type Master	DIM_LSA_SURFACE _TYPE	Life Style Activity Surface Type Dimension
541	STG_LSA_TRAVE L_PUR_TYPE_MA STER	Stage Life Style Activity Travel Purpose Type Master	DIM_LSA_TRAVEL_ PUR_TYPE	Life Style Activity Travel Purpose Type Dimension
542	STG_LSA_TRAVE L_TM_MASTER	Stage Life Style Activity Travel Transportation Mode Master	DIM_LSA_TRAVEL_ TM	Life Style Activity Travel Transportation Mode Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
543	STG_LSA_UW_DI VING_TYPE_MAS TER	Stage Life Style Activity Underwater Diving Type Master	DIM_LSA_UW_DIVI NG_TYPE	Life Style Activity Underwater Diving Type Dimension
544	STG_LSA_UW_DV _TRNG_TYPE_MA STER	Stage Life Style Activity Underwater Dive Training Type Master	DIM_LSA_UW_DV_T RNG_TYPE	Life Style Activity Underwater Dive Training Type Dimension
545	STG_LSA_UW_DV E_LOC_TYPE_MA STER	Stage Life Style Activity Underwater Dive Location Type Master	DIM_LSA_UW_DVE_ LOC_TYPE	Life Style Activity Underwater Dive Location Type Dimension
546	STG_LSA_UWDIV E_PUR_TYPE_MA STER	Stage Life Style Activity Underwater Dive Purpose Type Master	DIM_LSA_UWDIVE_ PUR_TYPE	Life Style Activity Underwater Dive Purpose Type Dimension
547	STG_LSA_UWDV NG_EQP_TYPE_M ASTER	Stage Life Style Activity Underwater Diving Equipment Type Master	DIM_LSA_UWDVNG _EQP_TYPE	Life Style Activity Underwater Diving Equipment Type Dimension
515	STG_LSA_MED_C ERTR_TYPE_MAS TER	Stage Life Style Activity Medical Certificate Restriction Type Master	DIM_LSA_MED_CER TR_TYPE	Life Style Activity Medical Certificate Restriction Type Dimension
548	STG_SEASON_TY PE_MASTER	Stage Season Type Master	DIM_SEASON_TYPE	Season Type Dimension
549	STG_TERRIAN_TY PE_MASTER	Stage Terrain Type Master	DIM_TERRIAN_TYP E	Terrain Type Dimension

## 18.3.5.2 About Party Lifestyle Activity T2T (Result Table)

Party Lifestyle Activity T2Ts and their description are given here.

Table 97: Party Lifestyle Activity T2Ts and their description

T2T Name	T2T Description
T2T_FCT_LIFESTYLE_ACTIVITY_DETAILS	This T2T stores the lifestyle activities details of a Party. This section captures details surrounding the activities a Party engages in, that may be considered risky by the Insurance Companies.
T2T_FCT_LSA_AIRSPORTS_EXP_DETAILS	This T2T stores the air sports experience details of a Party. It includes ballooning, hang gliding, parachuting, and ultra-lite experience.
T2T_FCT_LSA_COMPETITION_DTLS	This T2T stores the details of several life style activities competitions.

T2T Name	T2T Description
T2T_FCT_LSA_FORGN_TRAVEL_EXP_DTLS	This T2T stores foreign travel or foreign residence experience details of a Party.
T2T_FCT_LSA_MILITARY_EXP_DETAILS	This T2T stores the military experience details of a Party.
T2T_FCT_LSA_RACING_EXPERIENCE_DTLS	This T2T stores the racing experience details of a Party.
T2T_FCT_LSA_UW_DIVING_EXP_DETAILS	This T2T stores the underwater-diving experience details of a Party.
T2T_FCT_LSA_AVIATION_EXP_DETAILS	This T2T stores aviation experience details of a Party that may be flying or operating of aircraft.
T2T_FCT_LSA_CLIMBING_EXP_DTLS	This T2T stores the climbing experience details of a Party.

The mapping details for the Party Lifestyle Activity T2Ts are given here.

Table 98: The mapping details for the Party Lifestyle Activity T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table	T2T Name
STG_LIFESTYL E_ACTIVITY_DE TAILS	Stage Lifestyle Activity Details	FCT_LIFESTYLE_ ACTIVITY_DETAIL S	Fact Lifestyle Activity Details	T2T_FCT_LIFESTYLE_ACTIVI TY_DETAILS
STG_LSA_AIRS PORTS_EXP_DE TAILS	Stage Life Style Activity Airsports Experience Details	FCT_LSA_AIRSPO RTS_EXP_DETAIL S	Fact Life Style Activity Airsports Experience Details	T2T_FCT_LSA_AIRSPORTS_E XP_DETAILS
STG_LSA_COM PETITION_DTL S	Stage Life Style Activity Competition Details	FCT_LSA_COMPE TITION_DTLS	Fact Life Style Activity Competition Details	T2T_FCT_LSA_COMPETITIO N_DTLS
STG_LSA_FOR GN_TRAVEL_E XP_DTLS	Stage Life Style Activity Foreign Travel Experience Details	FCT_LSA_FORGN _TRAVEL_EXP_D TLS	Fact Life Style Activity Foreign Travel Experience Details	T2T_FCT_LSA_FORGN_TRAV EL_EXP_DTLS
STG_LSA_MILIT ARY_EXP_DET AILS	Stage Life Style Activity Military Experience Details	FCT_LSA_MILITA RY_EXP_DETAILS	Fact Life Style Activity Military Experience Details	T2T_FCT_LSA_MILITARY_EX P_DETAILS
STG_LSA_RACI NG_EXPERIENC E_DTLS	Stage Life Style Activity Racing Experience Details	FCT_LSA_RACING _EXPERIENCE_DT LS	Fact Life Style Activity Racing Experience Details	T2T_FCT_LSA_RACING_EXP ERIENCE_DTLS
STG_LSA_UW_ DIVING_EXP_D ETAILS	Stage Life Style Activity Underwater Diving Experience Details	FCT_LSA_UW_DI VING_EXP_DETAI LS	Fact Life Style Activity Underwater Diving Experience Details	T2T_FCT_LSA_UW_DIVING_ EXP_DETAILS
STG_LSA_AVIA TION_EXP_DET AILS	Stage Life Style Activity Aviation Experience Details	FCT_LSA_AVIATI ON_EXP_DETAILS	Fact Life Style Activity Aviation Experience Details	T2T_FCT_LSA_AVIATION_EX P_DETAILS

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LSA_CLIM BING_EXP_DTL S	Stage Life Style Activity Climbing Experience Details	FCT_LSA_CLIMBI NG_EXP_DTLS	Fact Life Style Activity Climbing Experience Details	T2T_FCT_LSA_CLIMBING_EX P_DTLS

# 18.4 Producer and Producer Agreement Tables

This section provides information about Insurance Producer and Producer Agreement tables in the Oracle Insurance Data Foundation application.

Insurance Producer refers to a person or a firm that must be licensed under the respective laws of the land to sell, solicit, or negotiate Insurance Contracts.

The agreement means a formal agreement between an Insurance firm and an Insurance Producer on the lines of authority specified in the agreement to sell, negotiate, or solicit the Insurance products with prospective customers. In some companies, an agent must also be appointed for selling particular products.

An insurance license is an authority to sell, solicit, or negotiate particular Insurance products and awarded by jurisdiction-specific insurance regulatory authority to Insurance Producers whereas producer agreements are between producers and insurance firms. The availability of a valid insurance license is a pre-requisite of the producer agreements. There are two types of agreements:

- Producer Agreements: This can be between producers, or a producer and a carrier. The basic
  components of Producer agreements are Producer and Carrier. The Producer Agreement specifies
  distribution details along with product types. Essentially, one Producer Agency handles multiple
  individual Producers on behalf of the carrier, where individual Producers are not appointed by a
  carrier is what is excluded from this.
- Carrier Appointments: This is about a direct appointment by an insurance carrier or appointment by producer agency. Basic components of Carrier Appointments are Carrier, Producer Agreement identifier, and Appointment Identifier. If the said appointment is through producer agency or agreement, then the end-user must populate the Producer Identifier. For direct appointments, producer agreement identifiers can be chosen not to be populated. Carrier appointments specify distribution details along with product types and other details. However, it is expected that when carrier appointments are done as part of producer agreement, then distribution and product types are within the allowed values as per producer agreement.

Producer and Producer Appointment tables store the details related to Producer, Producer Agreements, Carrier Appointments, and license, which covers both the use cases mentioned above. Producer Appointments and Agreements are used to track down the sales.

To determine the eligibility of a Producer, the Examinations and Certifications are used. For more information, see <a href="Party Producer Exam">Party Producer Exam</a>, <a href="Certification">Certification</a>, and <a href="License Tables">License Tables</a>.

These are the Producer and Producer Agreement entities:

Stage Producer Appointment Details loads the Producer Appointment details. The appointment
collection represents several appointments between the agent and several companies. The
appointment may be to an insurance company carrier or can be used for appointments to

- distributors. Appointments are assigned to each Producer by each company by jurisdiction. In some companies, an agent also must be appointed for selling particular products.
- Stage Producer Insurance Distribution Details loads the Insurance distribution details. It may be
  used with Carrier Code as entity recognition for referencing the associated Insurance Distribution
  Agreement.
- Stage Producer Line of Authority Details loads the individual lines of authority, which are required to offer this product for sale.

## 18.4.1 About Producer and Producer Agreement Dimension Tables

Producer and Producer Agreement Dimension table names and their descriptions are given here.

Table 99: Producer and Producer Agreement Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description
Insurance Distribution Level Type Dimension	This table stores the type of area, where the producer can distribute or is appointed for selling the insurance products.  Sample values: AREA, BRANCH, OTHER, UNKNOWN, CLIENTSEGMENT, and so on.
Insurance Distribution Payment Form Dimension	This table stores the Insurance Distribution Payment Form details. Sample values: CASH, CASHIERSCHK, CERTIFIEDCHK, and so on.
Insurance License Provision Type Dimension	This table stores the insurance License Provision Type Code details.  Sample values: OTHER, UNKNOWN, PERM, TEMP, and so on.
Insurance Solicitor Type Dimension	This table stores the insurance solicitor type details. This information is used in situations where a producer hierarchy involves separate individuals for soliciting and writing policies. These individuals can also be Brokers, General Agents, and so on, which is indicated via the Producer Appointment Type. There are licensing and appointment needs for each level of the hierarchy, as well as differences in the way compensation, is handled and the names that appear on the contract.  Sample values: OTHER, UNKNOWN, ADHERENT, and DRNONCOMM.
Insurance Producer Appointment Dimension	This table stores the Insurance Producer Appointment details.
Insurance Line Of Authority Dimension	This table stores the Insurance Line of Authority details.
Producer Attrition Event Dimension	This table stores the list of producer attrition event, reason for the status of the Producer or Producer Appointment as of the Producer Attrition Reason Date.  Sample values: OTHINSCARRIER, MARRIAGE, NEWPOSITION, OTHEREMP, ILLNESS, INCAPACITY, and so on.
Producer Attrition Event Reason Dimension	This table stores the list of Producer Attrition Reason code.  Sample values: OTHER, UNKNOWN, ACTIVE, REJECTED, INACTIVE, PENDING, SERVONLY, and TRANSFEROUT.
Producer Vested Type Dimension	This table stores the list of Producer vested type code.

Logical Dimension Table Name	Dimension Table Description		
	Sample values: FULL, NONE, OTHER, and UNKNOWN.		
Insurance Sub Channel Dimension	This table stores details of the type of Insurance Distribution subchannel.  Sample values: OTHER, UNKNOWN, FP, GA, MGA, and PPGA.		
Underwriting Privilege Type Dimension	This table stores the details of the level of underwriting authority granted to Producers. Sample values: OTHER, UNKNOWN, NORMAL, and SUPERIOR.		

The mapping details for the Producer and Producer Agreement Dimension tables are given here.

Table 100: The mapping details for the Producer and Producer Agreement Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
713	STG_INS_DSTBTN_ LVL_TYPE_MASTER	Stage Insurance Distribution Level Type Master	DIM_INS_DSTBTN_L VL_TYPE	Insurance Distribution Level Type Dimension
714	STG_INS_DIS_PAY MNT_FORM_MAST ER	Stage Insurance Distribution Payment Form Master	DIM_INS_DIS_PAYM NT_FORM	Insurance Distribution Payment Form Dimension
715	STG_INS_LCNS_PR VSN_TYPE_MASTE R	Stage Insurance License Provision Type Master	DIM_INS_LCNS_PRV SN_TYPE	Insurance License Provision Type Dimension
716	STG_INS_SOLICITO R_TYPE_MASTER	Stage Insurance Solicitor Type Master	DIM_INS_SOLICITOR _TYPE	Insurance Solicitor Type Dimension
717	STG_PRDCR_APPT MNT_DETAILS	Stage Producer Appointment Details	DIM_INSURANCE_PR DCR_APPT	Insurance Producer Appointment Dimension
718	STG_PRODUCER_L OA_DETAILS	Stage Producer Line Of Authority Details	DIM_INS_LINE_OF_A UTHORITY	Insurance Line Of Authority Dimension
719	STG_PRDCR_ATTR N_EVENT_MASTER	Stage Producer Attrition Event Master	DIM_PRDCR_ATTRN _EVENT	Producer Attrition Event Dimension
720	STG_PRDCR_ATTR N_REASON_MASTE R	Stage Producer Attrition Event Reason Master	DIM_PRDCR_ATTRN _REASON	Producer Attrition Event Reason Dimension
721	STG_PRDCR_VESTE D_TYPE_MASTER	Stage Producer Vested Type Master	DIM_PRDCR_VESTE D_TYPE	Producer Vested Type Dimension
722	STG_INS_SUB_CHA NNEL_MASTER	Stage Insurance Sub Channel Master	DIM_INS_SUB_CHAN NEL	Insurance Sub Channel Dimension

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
723	STG_UNW_PRIVILE GE_TYPE_MASTER	Stage Underwriting Privilege Type Master	DIM_UNW_PRIVILEG E_TYPE	Underwriting Privilege Type Dimension

# 18.4.2 About Producer and Producer Agreement T2Ts (Result Tables)

Producer and Producer Agreement T2Ts and their description are given here.

Table 101: Producer and Producer Agreement T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PRDCR_APPTMNT_DETAILS	This T2T stores the Producer's Appointment details. The appointment collection represents several appointments between the agent and several companies. The appointment may be to an insurance company carrier or can be used for appointments to distributors. For example, MGAs and National Accounts have similar processes for appointments. Appointments are assigned to each Producer by each company by jurisdiction. In some companies, an agent also must be appointed for selling particular products.
T2T_FCT_PRDCR_INS_DISTRBTION_DTLS	This table stores the Insurance distribution details. It may be used with Carrier Code as entity recognition for referencing the associated Insurance Distribution Agreement.
T2T_FCT_PRODUCER_LOA_DETAILS	This table stores the individual lines of authority, which are required to offer this product for sale.

Producer and Producer Agreement T2Ts and their description are given here.

Table 102: The mapping details for the Producer and Producer Agreement T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PRDCR_APP TMNT_DETAILS	Stage Producer Appointment Details	FCT_PRDCR_APPT MNT_DETAILS	Fact Producer Appointment Details	T2T_FCT_PRDCR_APPTM NT_DETAILS
STG_PRDCR_INS_ DISTRBTION_DTL S	Stage Producer Insurance Distribution Details	FCT_PRDCR_INS_DI STRBTION_DTLS	Fact Producer Insurance Distribution Details	T2T_FCT_PRDCR_INS_DIS TRBTION_DTLS
STG_PRODUCER_ LOA_DETAILS	Stage Producer Line Of Authority Details	FCT_PRODUCER_L OA_DETAILS	Fact Producer Line Of Authority Details	T2T_FCT_PRODUCER_LOA _DETAILS

# 18.5 Deploying Insurance Underwriting Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 18.6 Populating Insurance Underwriting Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# **18.7** Populating Insurance Underwriting T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# **18.8** Related Topics

You can see the following topics related to other function-specific tables:

- Product Tables
- Insurance Contracts Tables
- <u>Insurance Claims Tables</u>

# 19 Insurance Contracts Tables

This section provides information about Insurance Contracts tables such as Common Policy Summary tables, Reinsurance Contract Held tables, Reinsurance Contract Issued tables, other Reinsurance tables, Insurance Coverage tables, Insurance Policy, and Fund tables, and Policy Schedules tables in the Oracle Insurance Data Foundation application.

#### **Topics:**

- How to Load Insurance Contracts in OIDF?
- Contract Tables
- Coverage Tables
- Insurance Participation Tables
- Supplemental Data
- Reinsurance Contracts Tables
- Deploying Insurance Contracts Tables on Hive
- Populating Insurance Contracts Dimension Tables
- Populating Insurance Contracts T2T Result Tables
- Related Topics

Accounting standards define insurance contract as a contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

# 19.1 How to Load Insurance Contracts in OIDF?

This section provides information about how to load the Insurance Contracts in OIDF.

#### **Topics:**

- <u>Direct Insurance Contract Structure</u>
- Reinsurance Contracts

# 19.1.1 Direct Insurance Contract Structure

This diagram elaborates on the OIDF design for Direct Insurance Contracts. The base contract is loaded in the contract table, and coverages or riders are loaded to the coverages tables. One policy can contain more than one coverage. Depending on the applicability, a policy can consist of a fund associated with it and (or) a loan associated with it.

Direct Insurance Contracts DIRECT Policy/ **Policy Participation** Group **Policy Policy Policy Policy INSURANCE** Contract **Details Funds** Conversions Schedule Coverages **CONTRACT TYPE Entities** Product Policy Coverage, Insurance Group Loan Policy Insurance **Processors** Coverage Participation Beneficiary Fund, Contracts Conversion Policy Policy Fund Schedules Basis Details Details Details Details Allocation Applicability: Although Life Yes Yes Yes Yes Yes Yes Yes Yes Annuity Yes Yes Yes Yes NA Yes Yes Yes Health Yes Yes Yes Yes NA NA Yes Yes NA NA NA NA Property Yes Yes Yes NA and Casualty ΝΔ Yes NΔ NA NA Retirement Yes Yes Yes

Figure 89: Direct Insurance Contracts in OIDF

#### To load an Insurance Contract in OIDF, follow these steps:

- The key components in contract structure are Product, Party, and Contract itself. Under the contract component, the user must choose one of the Product Processors from Life, Annuity, Property and Casualty, Retirement, and Health.
- 2. Load Policy Coverages with Product Processor for multiple benefits or coverages.
- **3.** Some contracts such as Annuity requires funds where market risk is with the policyholder. Load this information to Policy Funds. This is an optional step and is dependent on the product structure.
- 4. Some contracts specify Adhoc or varying Policy Schedules such as Credit Life Insurance, varying premium policies, and so on, where the sum insured and premium amounts vary depending on the outstanding debt or other criteria. In such cases, customers can choose to load Policy Schedules in Stage Policy Schedules.
- 5. In the case of Group Insurance Contracts, the contract between the insurance provider and a company or group must be stored in either Life, Health, or applicable product processor. Stage Group Insurance Beneficiary Details hold details of each member such as individual limits, individual usage, and identifiers such as card numbers, annual and per condition deductibles. Another type of Group Insurance Contracts is the Worker's Compensation, which offers compensation to the employees for sustaining injuries or disabilities because of their employment. There are two ways to populate the data in the Fact Group Insurance Policy Summary table. They are:
  - The data population through the T2T\_FGPS\_STG\_GRPINS\_POLICY\_SUMMARY, which is at the Policy Summary level.
  - The data population through the T2T\_FGPS\_STG\_GRPINS\_POL\_BENFCIARY\_DTLS, where the data can be populated for the count at the policy or beneficiary level.
- 6. For loans issued under a given policy, load contracts into one of the Insurance product processor, and load every loan contract issued under a given policy to stage loan contracts. See the <u>Policy Loans</u> section.

**7.** Contracts, which are convertible from one insurance product to another with or without changing the insurance carrier, require additional conversion details. For more details, see <a href="Policy Conversion">Policy Conversion</a>.

In OIDF, Direct Insurance Contracts comprise of the following important components:

- Contract
- Coverage
- Supplemental Data
- Insurance Participation
- Policy and Funds
- Policy Loans
- Policy Conversion

In OIDF, Reinsurance is also a part of Contracts.

Party, which means a beneficiary, producer and agent, underwriter, and so on, are expected to be created and available for reference in the Party set of tables based on the related role. For details, see the <a href="Party Subject Area">Party Subject Area</a> section.

#### **19.1.1.1** Contract

Contract attributes cover contract identifier, product identifier, the sum insured, origination date, purchase date, maturity date, policy status, and so on. A group insurance contract must also be stored in one of the relevant tables mentioned below.

Contracts, as defined earlier, is a record in one of the following stage tables, called as a product processor comprising of a set of attributes relevant to a particular Insurance Contract. They are outputs sourced from policy administration systems.

This is the list of entities covered under Direct and Indirect Insurance or Reinsurance Contracts to elaborate OIDF design for Insurance Contracts.

Table 103: Direct and Indirect Insurance, or Reinsurance Contracts entities

Source Logical Table Name	Source Table Name		
Stage Annuity Contracts	STG_ANNUITY_CONTRACTS		
Stage Health Insurance Contracts	STG_HEALTH_INS_CONTRACTS		
Stage Life Insurance Contracts	STG_LIFE_INS_CONTRACTS		
Stage Property and Casualty Contracts	STG_PROP_CASUALTY_CONTRACTS		
Stage Retirement Accounts	STG_RETIREMENT_ACCOUNTS		
Stage Reinsurance Contracts Held	STG_REINSURANCE_CONTRACTS_HELD		
Stage Reinsurance Contracts Issued	STG_REINSURANCE_CNTRCTS_ISSUED		

For the list of tables and the mapping details, see **Contract Tables**.

#### **19.1.1.2** Coverage

Coverage is an individual contractual obligation incurred by the contract provider. Aggregation of all such obligations within the terms and conditions defined must be equal to contractual liability of a contract. Consider these two examples:

- A Life Insurance contract offering a normal death benefit, accidental death benefit, and critical illness benefits to the insured.
- An Auto Insurance policy with auto liability, medical payment liability, personal injury protection, and third-party liability.

In the above example, a single row is created in the life insurance contract entity and property and casualty insurance contract entity. And the policy coverage entity stores three rows for the life insurance contracts and four rows for auto insurance contracts. In many insurance contracts, certain coverages, known as riders, are optional, and some are bundled as a part of the contract itself. All such coverages must be stored in stage policy coverages. Different coverages may have effective dates having different maturity periods and may have to vary different terms and conditions limiting to the main contract. Stage Policy Coverage entity allows the end-user to handle this flexibility. In the case of group insurance, policy coverages refer to the single aggregated benefit or rider bundled as a part of the product across all group members.

Riders or optional benefits must be loaded as coverages in Oracle Insurance Data Foundation. Coverage option or a component, which is dependent on the existence and continuation of another component and its effect or attributes is limited to a specific parent, then it must be modeled as a Coverage. Therefore, this relationship defines an association between the Coverage Option and its parent, where if the parent lapses or is no longer in effect for any reason, the Coverage Option under it also lapses or terminates or ends.

For the list of tables and mapping details, see **Coverage Tables**.

#### 19.1.1.2.1 Guaranteed Benefits and Embedded Options

#### **Guaranteed Benefits:**

Guaranteed Benefits is a component of insurance policy or contract, which provides for either part of the full benefit amount is guaranteed by the Insurer.

Examples for illustration (These examples are not limited to this illustration):

- Scenario 1: On death during the policy term, the nominee receives a guaranteed lump sum payout
  with an option to convert it into monthly income for 10 years. On the death of the Life Insured
  during the Policy Term, lump sum Death Benefit equal to Guaranteed Sum Assured on Death
  (GSAD) is payable to the nominee.
- Scenario 2: On retirement, the plan may payout in monthly payments throughout the lifetime of the
  employee, or as a lump sum payment. If the employee dies, some plans distribute any remaining
  benefits to the beneficiaries of the employee.

#### **Embedded Options:**

An Embedded Option is a special condition attached to an Insurance Contract, which gives the policyholder or the issuer the right to perform a specified action at some point in the future. An Embedded Option is an inseparable part of an Insurance Contract, and therefore, it cannot trade by itself. However, it can affect the value of the Insurance Contract of which it is a component.

To separate an Embedded Option from the Insurance Contract, the following conditions must be met:

- The economic characteristics and risks of the Embedded Option are not closely related to the economic characteristics and risks of the host (the remaining Insurance Contract).
- A separate instrument with the same terms as the Embedded Option meets the definition of an Option.
- The contract, which is not measured at fair value with changes in fair value recognized in profit or loss.

Examples for illustration (These examples are not limited to this illustration):

- Example 1: A Death Benefit that is linked to equity prices payable only on death (and not on surrender or maturity), or the greater of the unit value of an investment and a guaranteed amount.
   In this scenario, the existing benefit, which is the Death Benefit option, is in the contract and is linked to the market. Therefore, Embedded Option is not separated and it falls under IFRS 17.
- Example 2: An option to take a Life-Contingent Annuity at a guaranteed rate.
   In this scenario, the existing benefit is given out as an additional benefit option to the contract in the form of Embedded Option. This benefit is not separated from the Insurance Contracts.
- Example 3: A minimum annuity payment, if the annuity payments are linked to the investment returns. Additionally, the guarantee is related only to Life-Contingent Payments, or the policyholder can choose to receive a Life-Contingent Payment or a fixed amount of payments at predetermined terms.

In this scenario, the minimum annuity payment, which is made by the insured is periodically linked to the investment returns of the contract with an additional benefit option to the contract as an Embedded Option. Therefore, it is not separated from the Insurance Contracts.

Both Guaranteed Benefits and Embedded Options must be loaded to stage policy coverages covering specific attributes such as Guarantee Type, Option Dates, and so on. For the list of tables and mapping details, see <a href="Embedded Options Tables"><u>Embedded Options Tables</u></a>.

#### 19.1.1.3 Insurance Participation

When multiple carriers share the insurance risk, it is called as Insurance Participation. In OIDF, load the participation data to Stage Insurance Participation Details. In this participation entity, the Contract Code refers to the Insurance Contract.

For the list of tables and mapping details, see <u>Insurance Participation Tables</u>.

#### 19.1.1.4 Supplemental Data

Supplemental Data refers to the additional and contextual information applicable to only certain specific insurance contracts. This consists of group insurance details, policy schedules, policy funds, policy loans, and policy conversions.

#### **19.1.1.4.1** Group Policies

A group insurance contract is one that is agreed between the insurance company and entity which sponsors the policy. This contract must be stored in one of the seven product processors. However, in general, stage life insurance and stage health insurance, contracts will be referred to in most of the use cases of group insurance.

Details of members of group insurance are stored in stage group insurance beneficiary details. This entity holds details of each member such as individual limits, individual usage, and identifiers such as card numbers, annual and per condition deductibles. In cases where such details are not available, aggregated numbers must be loaded in main contract entities. For the list of tables and mapping details, see <a href="Group Beneficiary Tables">Group Beneficiary Tables</a>.

#### 19.1.1.4.2 Policy Schedules

Policy Schedules refers to the agreed non-linear premium and benefit schedules associated with the insurance contracts. For the list of tables and mapping details, see <u>Policy Schedules Table</u>.

#### **19.1.1.4.3** Policy and Funds

This holds investment of funds data of a given insurance contract where the market risk of investment rests with Policyholders. There are two entities: policy fund details and policy fund allocation. Policy Funds provide funds-wise investment snapshot in time when policy fund allocation provide changes over time. When there is technically no restriction as these entities are connected by policy code to the main contract table, they are most commonly applicable to annuity contracts, life insurance contracts, and retirement accounts. For the list of tables and mapping details, see <u>Policy and Funds Tables</u>.

#### 19.1.1.4.4 Policy Loans

Some insurance policies allow policyholders to borrow from policy accumulations in terms of loans as per the terms and conditions laid in the contract. Such loans are considered as a contract by itself in OIDF and must be loaded in stage loan contracts. This entity holds policy identifiers to link multiple loans taken under a given insurance policy. For the list of tables and mapping details, see <a href="Policy Loans Tables">Policy Loans Tables</a>.

#### 19.1.1.4.5 Policy Conversion

Policy Conversion refers to the privileged provisions provided in an insurance contract whereby a policyholder to convert a term policy to a permanent policy that provides insurance for the rest of life.

For the list of tables and mapping details, see Policy Conversion Table.

#### **19.1.1.4.6** Special Events

An Insurer can insure their special event such as sports, film shooting, concerts, and so on under the Policy Coverages against the liabilities.

Any Party that needs insurance coverage against the liquor liabilities can obtain insurance using the Policy Coverages. The liquor liabilities coverage may be applicable as a part of the Special Event Insurance if the liquor is served at the special event venue.

The STG\_POLICY\_COVERAGES and FCT\_ POLICY\_COVERAGES tables are enhanced to store the special events-related information. For information about the Policy Coverages tables, see the section <a href="Coverage">Coverage</a> <a href="Tables">Tables</a>.

A special event can consist of multiple Policy Coverages. Therefore, the Policy Coverage Special Event Map tables are added in the Oracle Insurance Data Foundation Application Pack. The Policy Coverage Special Event Map table is used to save the special event and policy coverage mapping details such as the Policy ID, Coverage ID, and Special Event ID, and Liquor License Reference. As a result, when a special event consists of multiple Policy Coverages, the special event information is mapped to the Policy Coverages using this Policy Coverage Special Event Map table. For more information about the Policy Coverages tables, see the Coverage Tables section.

## 19.1.2 Reinsurance Contracts

Reinsurance contract refers to an insurance contract issued by one entity (the reinsurer) to compensate another entity for claims arising from one or more insurance contracts issued by that other entity (underlying insurance contracts). Reinsurance Contracts consists of two types of contracts:

- Reinsurance Contracts Issued: This is a contract entered into by a reinsurance company when they sell the reinsurance contract to an insurance company. Often, this is called as a reinsurance contract written by a specific reinsurer to differentiate between purchased and sold.
- Reinsurance Contracts Held: This is a contract entered into by an insurance company when they purchase a reinsurance contract to mitigate the claims or losses.

#### **Reinsurance Contracts Issued and Held**

Reinsurance Contracts Issued and Held is depicted through the following diagram.

Figure 90: Reinsurance Contracts Issued and Held in OIDF

Reinsu	ranc	e Cor	ntracts	5			
REINSURANCE CONTRACT TYPE	Policy/ Contract	Policy Coverages	Participation Details	Collateral Placed	Collateral Received	Underlying Contracts	Contract Dimension
Entities	Applicable Product Processor	Coverage, Coverage Basis Details	Insurance Participation Details	Reinsurance Issued Placed Collateral Map Placed Collateral	Reinsurance Held Mitigants Map, Mitigants	Respective Direct Insurance Contract Product Processors	Key Contract Dimension *Policy: On Books *Assumed Policy: Not on Books
Applicability							
Reinsurance Held	Yes	Yes	Yes	NA	Yes	Life, Health, P&C, Annuity, Retirement	Direct Contracts: Policy Reinsurance Contract: Policy
Reinsurance Issued	Yes	Yes	Yes	Yes	NA	Life, Health, P&C, Annuity, Retirement	Direct Contract: Assumed Policy Reinsurance Contract: Policy

For the list of tables and mapping details, see Reinsurance Contracts Tables.

#### 19.1.2.1 Reinsurance Contracts

Reinsurance Contract structure consists of a set of entities, primarily Direct Contracts, Assumed Contracts, Reinsurance Contract, Collateral Placed, Collateral Received, Participation Contracts. This is the representative diagram of the Reinsurance Contract and its entities.

Reinsurance Held Contract Type Stage Entity Result Entity **Key Contract Dimension** Differentiator Stage Life Insurance Contracts Direct Written Policies Fact Common Policy Summary Policy Dimension Stage Property and Casulaty Contracts Stage Health insurance Contracts Direct Or Assumed Insurance Indicator = Direct Stage Annuity Contracts Stage Retirement Contracts Stage Policy Coverages Fact Policy Coverages Coverage Dimension Policy Dimension Reinsurance Contract Stage Reinsurance Contract Held Fact Reinsurance Contract Held Stage Reinsurance Held Mitigant Map Fact Reinsurance Held Mitigant Map Policy and Mitigant Dimensio Participation Details Stage Insurance Participation Details Fact Insurance Participation Details Stage Insurance Policy Cash Flow Fact Insurance Policy Cash Flow Cash flow - Direct Policies Stage Insurance Policy Cash Flow Cash flow - RI Held Fact Insurance Policy Cash Flow Reinsurance Issued Stage Entity Result Entity Key Contract Dimension Differentiator Assumed Policies Stage Life Insurance Contracts Fact Assumed Policy Summary Assumed Policy Dimension Stage Property and Casulaty Contracts Direct Or Assumed Insurance Indicator = Stage Health insurance Contracts Assumed Stage Annuity Contracts Stage Retirement Contracts Stage Policy Coverages Fact Policy Coverages Coverage Dimension Reinsurance Contract Stage Reinsurance Contract Issued Fact Reinsurance Contract Issued Policy Dimension Stage Reinsurance Issued Placed Collateral Map | Fact Reinsurance Issued Placed Collateral Map | Policy and Placed Collateral Dimension Participation Details Stage Insurance Participation Details Fact Insurance Participation Details Cash flow - Assumed Policies\* Stage Assumed Policy Cash Flow Fact Assumed Policy Cash Flow ash flow - RI Issued Stage Insurance Policy Cash Flow

Figure 91: Reinsurance Contract structure

Reinsurance Contract entities are explained in the following sections.

#### 19.1.2.1.1 Direct Insurance Contracts

In the case of Reinsurance Held, Direct Insurance Contracts are those, which are on the books of the insurance carrier and covered through a given reinsurance contract. These Direct Contracts are loaded through the same insurance contract structure, as mentioned earlier. They are product processors for Life, Health, Annuity, Retirement, and Property, and Casualty contracts. However, Direct and Assumed Indicators in each product processor must be marked as D to convey that they are on the books.

For the list of tables and mapping details, see <a>Common Policy Summary Tables</a>.

#### 19.1.2.1.2 Assumed Insurance Contracts

In the case of Reinsurance Issued, Reinsurance Contract is on the books of the carrier whereas insurance contracts covered belong to another carrier. These underlying Insurance Contracts must be loaded through some insurance contract structure as mentioned earlier. They are product processors for Life, Health, Annuity, Retirement, and Property, and Casualty contracts. However, Direct and Assumed Indicators in each product processor must be marked as A to convey that they are not on the books and are assumed ones.

For the list of tables and mapping details, see Assumed Policy Summary tables in the <u>Contract Tables</u> section.

#### 19.1.2.1.3 Reinsurance Contracts

Reinsurance Contracts, as mentioned above earlier, must be loaded to Stage Reinsurance Contracts Issued or Stage Reinsurance Contracts Held. Underlying Direct Insurance Contracts, which are on the book or marked as D for Direct in Direct or Assumed Indicator, are moved to Policy Dimension. In addition, those, which are not on the book or marked as A for Assumed in Direct or Assumed Indicator, are moved to Assumed Policy Dimension to differentiate contracts effectively.

For the list of tables and mapping details, see Reinsurance Contracts Tables.

#### 19.1.2.1.4 Reinsurance Participation

When multiple reinsurers come together to share the insurance risk, said contract becomes eligible for Reinsurance Participation. OIDF holds this data in Stage Insurance Contract Participation Details. In this participation entity, the Contract Code refers to the Reinsurance Contract.

For the list of tables and mapping details, see **Insurance Participation Tables**.

#### 19.1.2.1.5 Reinsurance Issued Placed Collateral

In the case of reinsurance contracts Issued, the reinsurance carrier provides the collateral to insurance companies for safety. This is called a Reinsurance Issued Placed Collateral. OIDF provides a map entity to map a given Reinsurance Contract and collateral placed. Actual investment contracts, which are placed as collateral can be loaded to investment product processors such as Stage Investment or Stage Money Market Contracts and (or) Stage Placed Collateral depending on whether investment assets have been transferred as actual physical transfer or not.

For the list of tables and mapping details, see About Reinsurance Contracts T2Ts (Result Tables).

### 19.1.2.1.6 Reinsurance Held Mitigants

In the case of Reinsurance Contracts Held, the insurance carrier holds the collateral provided by reinsurance companies for safety. This is called as Reinsurance Held Mitigants. OIDF provides a map entity to map a given reinsurance contract and collateral received or mitigants.

For the list of tables and mapping details, see About Reinsurance Contracts T2Ts (Result Tables).

## 19.2 Contract Tables

This section provides information about the Contract tables.

#### **Topics:**

- Common Policy Summary Tables
- Long Duration Contracts Table
- <u>Life Insurance Contract Tables</u>
- Health Insurance Contract Tables
- Annuity Contract Tables
- Property and Casualty Contract Tables
- Retirement Contract Tables

# 19.2.1 Common Policy Summary Tables

Common Policy Summary stores the detailed information elements of insurance policies directly written or issued by the insurance companies.

### 19.2.1.1 About Common Policy Summary Dimension Tables

Common Policy Summary Dimension table names and their descriptions are given here.

Table 104: Common Policy Summary Dimension table names and their descriptions

Logical Dimension Table Name	Dimension Table Description		
Insurance Notice Type Dimension	This table stores the details of the type of notice sent.		
	Sample values are OTHER, UNKNOWN, CONFIRM, PREM1, and so on.		
Insurance Sponsoring Plan Type Dimension	This table stores the type of sponsored benefit plan to which this holding belongs.		
	Sample values are OTHER, UNKNOWN, ESLTC, and SEWBP.		
Policy Status Reason Dimension	This table stores the details of policy reasons for status.  Sample values are OTHER, UNKNOWN, APPEAL, APPDECLINE, BACKPROC, and so on.		
Policy Exchange Reason Dimension	This table stores the Exchange Reason Code details. It is used only when a single exchange reason is required. For multiple reasons for the exchange, use Exchange Reason aggregate. Sample values: OTHER, UNKNOWN, BROKERSDIR, COMM, FEES, and so on.		
Policy Replacement Type Dimension	This table stores the details of the proposed policy replacement type and reflects in aggregate the replacement types of all existing contracts that will be replaced.		
	Sample values: OTHER, UNKNOWN, BOTH, EXTERNAL, FINPURCH, GROUPCONV, and so on.		
Premium Offset Status Dimension	This table stores the details about premium offset status. In situations where a Premium Offset Method is specified, this is the status of that method.		
	Sample values: REQACT, NONE, REQINACT, UNKNOWN, and OTHER.		
Non-Forfeiture Provision Type Dimension	This table stores the details of the Non-Forfeiture Provision type. The several ways in which a policy owner may apply the cash value of a life insurance policy if the policy lapses.  Sample values: ANNRID, APLANNRID, APLEXTTERM, OTHER, and so on.		
Insurance Test Type Dimension	The table stores the details of the life insurance test type.  Sample values: CVTEST, DEFRACVTEST, GPTEST, and TEFRAGPEST.		
Tax Rebate Exchange Type Dimension	This table stores the details of the tax rebate exchange type.  Sample values: IRREVOC, OTHER, REVOC, and so on.		
Grandfathered Tax Regulation Type Dimension	This table stores the details of the Grandfathered Tax Regulation Type and specifies if a policy or contract is grandfathered under certain tax regulations.		
	Sample values: DEFRA, ROTHIRA, TAMRA, NO, OTHER, and UNKNOWN.		
Premium Basis Dimension	Stores the details of the Premium Basis. An insurance premium is based on the type and amount of risk, or exposure, involved in operating a business.		
	Sample values: 1000CubicMeters, 1000Liters, ADMIS, AREA, Basic, Building, Court, and so on.		
Worker Compensation Business Line Dimension	Stores the details of the Worker's Compensation business line.		

The mapping details for the Common Policy Summary Dimension tables are given here.

Table 105: The mapping details for the Common Policy Summary Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
685	STG_INS_NOTICE_T YPE_MASTER	Stage Insurance Notice Type Master	DIM_INS_NOTICE_TY PE	Insurance Notice Type Dimension
686	STG_INS_SPON_PLA N_TYPE_MASTER	Stage Insurance Sponsoring Plan Type Master	DIM_INS_SPON_PLA N_TYPE	Insurance Sponsoring Plan Type Dimension
687	STG_POLICY_STATU S_RSN_MASTER	Stage Policy Status Reason Master	DIM_POLICY_STATU S_RSN	Policy Status Reason Dimension
691	STG_POL_EXCHANG E_REASON_MASTER	Stage Policy Exchange Reason Master	DIM_POL_EXCHANG E_REASON	Policy Exchange Reason Dimension
692	STG_POL_REPLACE MNT_TYPE_MASTER	Stage Policy Replacement Type Master	DIM_POL_REPLACE MNT_TYPE	Policy Replacement Type Dimension
730	STG_PREM_OFFSET_ STATUS_MASTER	Stage Premium Offset Status Master	DIM_PREM_OFFSET_ STATUS	Premium Offset Status Dimension
732	STG_NONFOREFT_P ROV_TYPE_MASTER	Stage Non Forfeiture Provision Type Master	DIM_NONFOREFT_P ROV_TYPE	Non Forfeiture Provision Type Dimension
734	STG_INSURANCE_TE ST_TYPE_MASTER	Stage Insurance Test Type Master	DIM_INSURANCE_TE ST_TYPE	Insurance Test Type Dimension
735	STG_TAX_REBATE_E X_TYPE_MASTER	Stage Tax Rebate Exchange Type Master	DIM_TAX_REBATE_E X_TYPE	Tax Rebate Exchange Type Dimension
736	STG_GF_TAX_REGLT N_TYPE_MASTER	Stage Grandfathered Tax Regulation Type Master	DIM_GF_TAX_REGLT N_TYPE	Grandfathered Tax Regulation Type Dimension
780	STG_PREMIUM_BASI S_MASTER	Stage Premium Basis Master	DIM_PREMIUM_BASI S	Premium Basis Dimension
786	STG_WC_BUSINESS_ LINE_MASTER	Stage Worker Compensation Business Line Master	DIM_WC_BUSINESS_ LINE	Worker Compensation Business Line Dimension

### 19.2.1.2 About Common Policy Summary T2T (Result Table)

For information about the Common Policy Summary T2Ts, see the following sections:

- About Life Insurance Contract T2Ts (Result Tables)
- About Health Insurance Contract T2Ts (Result Tables)
- About Annuity Contract T2Ts (Result Tables)
- About Property and Casualty Contract T2Ts (Result Tables)
- About Retirement Contract T2Ts (Result Tables)

# 19.2.2 Long Duration Contracts Table

Long Duration Contracts (principally life and annuity contracts) table stores the calculation of the liability of future policy benefits, a simplified amortization method for deferred acquisition costs, recording market risk benefits at fair value, and enhanced disclosures.

### 19.2.2.1 About Long Duration Contracts Dimension Table

Long Duration Contracts Dimension table name and its description are given here.

Table 106: Long Duration Contracts Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Insurance Guarantee Type Dimension	This table stores the details of the Insurance guarantee type.

The mapping details for the Long Duration Contracts Dimension table are given here.

Table 107: The mapping details for the Long Duration Contracts Dimension table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
701	STG_INS_GUARANT EE_TYPE_MASTER	Stage Insurance Guarantee Type Master	DIM_INS_GUARANTE E_TYPE	Insurance Guarantee Type Dimension

## 19.2.3 Life Insurance Contract Tables

Life insurance is a contract between an insurer and a policyholder in which the insurer guarantees payment of a death benefit to the named beneficiaries when the insured dies. The insurance company promises a death benefit in exchange for premiums paid by the policyholder.

### 19.2.3.1 About Life Insurance Contract Dimension Tables

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For the description of Policy Dimension, see the section <u>Policy Dimension Table</u>.

Assumed Policy Summary stores the detailed information elements of insurance policies that are not directly written or issued by the insurance company. In the Contracts table, if the value of the Direct Assumed Indicator column is A, then Fact Assumed Policy Summary tables are populated.

Life Insurance Contract Dimension table names and their description are given here.

Table 108: Life Insurance Contract Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Dimension	This table stores the list of all policies issued by the insurer.
Assumed Policy Dimension	This table stores the assumed policy details.

The mapping details for the Life Insurance Contract Dimension tables are given here.

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For mapping information about Policy Dimension, see the chapter <u>Policy Dimension Table</u>.

Table 109: The mapping details for the Life Insurance Contract Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
401	STG_LIFE_INS_CONT RACTS_V	Stage Life Insurance Contracts View	DIM_POLICY	Policy Dimension
616	VW_STG_LIFE_INS_C ONTRACTS	Stage Life Insurance Contracts View	DIM_ASSUMED_POLI CY	Assumed Policy Dimension

### 19.2.3.2 About Life Insurance Contract T2Ts (Result Tables)

NOTE	In the Fact Common Policy Summary tables, if the value of V_DIRECT_ASSUMED_RI_IND is D or NULL or any other value apart from A, then Fact Common Policy Summary T2Ts are populated. Here, D is Direct Contracts, and A is Assumed Contracts.
NOTE	In the Contracts tables, if the value of V_DIRECT_ASSUMED_RI_IND is A, then Fact Assumed Policy Summary T2Ts are populated. Here, A is Assumed Contracts.

Life Insurance Contract T2Ts and their description are given here.

Table 110: Life Insurance Contract T2Ts and their description

T2T Name	T2T Description
T2T_FCPS_STG_LIFE_INS_CONTRACTS	This T2T stores details of policy related to life insurance contracts.
T2T_FAPS_STG_LIFE_INS_CONTRACTS	This T2T stores the details of policy related to life insurance contracts.

The mapping details for Life Insurance Contract T2Ts and their description are given here.

Table 111: The mapping details for Life Insurance Contract T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LIFE_INS_C	Stage Life Insurance	FCT_COMMON_P	Fact Common	T2T_FCPS_STG_LIFE_INS
ONTRACTS	Contracts	OLICY_SUMMARY	Policy Summary	_CONTRACTS
STG_LIFE_INS_C	Stage Life Insurance	FCT_ASSUMED_P	Fact Assumed	T2T_FAPS_STG_LIFE_INS
ONTRACTS	Contracts	OLICY_SUMMARY	Policy Summary	_CONTRACTS

### 19.2.4 Health Insurance Contract Tables

Health insurance is a contract between the insurer and the policyholder or an individual's sponsor in which the insurer provides the payments of the complete or a part of the risk that the policyholder (or registered beneficiaries) incurs in the form of medical expenses in exchange for premiums paid by the policyholder or by the individual's sponsor.

An insurer develops a routine finance structure, such as a monthly premium or payroll tax by estimating the overall health risk and health system expenses over the risk pool and provides the money to pay for the health care benefits specified in the insurance agreement.

### 19.2.4.1 About Health Insurance Contract Dimension Tables

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For the description of Policy Dimension, see the chapter <u>Policy Dimension Table</u>.

Assumed Policy Summary stores the detailed information elements of insurance policies that are not directly written or issued by the insurance company. In the Contracts table, if the value of the Direct Assumed Indicator column is A, then Fact Assumed Policy Summary tables are populated.

Health Insurance Contract Dimension table names and their description are given here.

Table 112: Health Insurance Contract Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Dimension	This table stores the list of all policies issued by the insurer.
Assumed Policy Dimension	This table stores the assumed policy details.

The mapping details for the Health Insurance Contract Dimension tables are given here.

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For mapping information about Policy Dimension, see the chapter <u>Policy Dimension Table</u>.

Table 113: The mapping details for the Health Insurance Contract Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
402	STG_HEALTH_INS_C ONTRACTS_V	Stage Health Insurance Contracts View	DIM_POLICY	Policy Dimension
617	VW_STG_HEALTH_I NS_CONTRACTS	Stage Health Insurance Contracts View	DIM_ASSUMED_POLI CY	Assumed Policy Dimension

### 19.2.4.2 About Health Insurance Contract T2Ts (Result Tables)

NOTE	In the Fact Common Policy Summary tables, if the value of V_DIRECT_ASSUMED_RI_IND is D or NULL or any other value apart from A, then Fact Common Policy Summary T2Ts are populated. Here, D is Direct Contracts, and A is Assumed Contracts.
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**NOTE** In the Contracts tables, if the value of V\_DIRECT\_ASSUMED\_RI\_IND is A, then Fact Assumed Policy Summary T2Ts are populated. Here, A is Assumed Contracts.

Health Insurance Contract T2Ts and their description are given here.

Table 114: Health Insurance Contract T2Ts and their description

T2T Name	T2T Description
T2T_FCPS_STG_HEALTH_INS_CONTRAC TS	This T2T stores details of policy related to health insurance contracts.
T2T_FAPS_STG_HEALTH_INS_CONTRAC TS	This T2T stores details of policy related to health insurance contracts.

The mapping details for Life Insurance Contract T2Ts and their description are given here.

Table 115: The mapping details for Life Insurance Contract T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_HEALTH_IN	Stage Health	FCT_COMMON_P	Fact Common	T2T_FCPS_STG_HEALTH
S_CONTRACTS	Insurance Contracts	OLICY_SUMMARY	Policy Summary	_INS_CONTRACTS
STG_HEALTH_IN	Stage Health	FCT_ASSUMED_P	Fact Assumed	T2T_FAPS_STG_HEALTH _INS_CONTRACTS
S_CONTRACTS	Insurance Contracts	OLICY_SUMMARY	Policy Summary	

#### **Annuity Contract Tables** 19.2.5

Annuity tables store the details of annuity contracts, which are defined as a written agreement between a financial institution and a customer outlining obligations of each Party in an annuity coverage agreement.

#### 19.2.5.1 **About Annuity Contract Dimension Tables**

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For the description of Policy Dimension, see the chapter Policy Dimension Table.

Assumed Policy Summary stores the detailed information elements of insurance policies that are not directly written or issued by the insurance company. In the Contracts table, if the value of the Direct Assumed Indicator column is A, then Fact Assumed Policy Summary tables are populated.

Annuity Contract Dimension table names and their description are given here.

Table 116: Annuity Contract Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Dimension	This table stores the list of all policies issued by the insurer.
Assumed Policy Dimension	This table stores the assumed policy details.
Annuity Payout Type Dimension	This table stores the details of the annuity payout type.  Sample values: FIX, VAR, and so on.
Annuity Type Dimension	This table stores the details of the annuity type for the policies. Sample values: LOA, LAPC, LAGT, JSA.

The mapping details for the Annuity Contract Dimension tables are given here.

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For mapping information about Policy Dimension, see the chapter Policy Dimension Table.

Table 117: The mapping details for the Annuity Contract Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
403	STG_ANNUITY_CON TRACTS_V	Stage Annuity Contracts View	DIM_POLICY	Policy Dimension
618	VW_STG_ANNUITY_ CONTRACTS	Stage Annuity Contracts View	DIM_ASSUMED_POLI CY	Assumed Policy Dimension
702	STG_ANNUITY_PAY OUT_TYPE_MASTER	Stage Annuity Payout Type Master	DIM_ANNUITY_PAY OUT_TYPE	Annuity Payout Type Dimension
703	STG_ANNUITY_TYPE _MASTER	Stage Annuity Type Master	DIM_ANNUITY_TYPE	Annuity Type Dimension

#### **About Annuity Contract T2Ts (Result Tables)** 19.2.5.2

NOTE  In the Fact Common Policy Summary tables, if the value of V_DIRECT_ASSUMED_RI_IND is D or NULL or any other value apart from Fact Common Policy Summary T2Ts are populated. Here, D is Direct Con and A is Assumed Contracts.	•
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In the Contracts tables, if the value of V\_DIRECT\_ASSUMED\_RI\_IND is A, then **NOTE** Fact Assumed Policy Summary T2Ts are populated. Here, A is Assumed Contracts.

Annuity Contract T2Ts and their description are given here.

Table 118: Annuity Contract T2Ts and their description

T2T Name	T2T Description
T2T_FCPS_STG_ANNUITY_CONTRACTS	This T2T captures the details of annuity contracts, which are defined as a written agreement between a financial institution and a customer outlining obligations of each Party in an annuity coverage agreement.
T2T_FAPS_STG_ANNUITY_CONTRACTS	This T2T stores annuity contract details, which are defined as a written agreement between a financial institution and a customer outlining the obligations of each Party in an annuity coverage agreement.

The mapping details for Life Insurance Contract T2Ts and their description are given here.

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_ANNUITY_C	Stage Annuity	FCT_COMMON_P	Fact Common	T2T_FCPS_STG_ANNUIT
ONTRACTS	Contracts	OLICY_SUMMARY	Policy Summary	Y_CONTRACTS
STG_ANNUITY_C	Stage Annuity	FCT_ASSUMED_P	Fact Assumed	T2T_FAPS_STG_ANNUIT
ONTRACTS	Contracts	OLICY_SUMMARY	Policy Summary	Y_CONTRACTS

Table 119: The mapping details for Life Insurance Contract T2Ts

### 19.2.6 Property and Casualty Contract Tables

This section details the Property and Casualty Contract tables in the Oracle Insurance Data Foundation application.

In the Property and Casualty Contract category, the Auto Insurance tables store details of the policy related to the auto insurance contracts. The OIDF application supports auto insurance contracts for individual vehicles and a fleet of vehicles.

To load an Auto Insurance Contract in OIDF, follow these steps:

- 1. The key components in the Auto Insurance Contract structure are the details related to the vehicle, inspection, inspection report, driver, driver's license, and the Contract itself. Under the Contract component, the user must choose the Property and Casualty Product Processor.
- **2.** Based on the Policy ID, load Dimensions for the vehicle, and the type of the vehicle body, seat belt, engine, lease, tire, interior material, and the vehicle purpose.
- 3. Inspection is done based on whether the policy is new or if it must be renewed, or is it a claim request. The policy renewal is additionally based on the extent of the vehicle damage. Now, load the vehicle inspection details. If a vehicle is exempt from inspection, then load the Vehicle Inspection Exempt Reason Dimension with the reasons for exemption. The inspection progress must be monitored and therefore, load the vehicle inspection status details.
- **4.** The vehicle inspection details and the vehicle inspection status are used to rate the vehicle. Load the vehicle rating information.
- 5. Load the Driver Dimension details.
- **6.** Load the driver's license and driver's license status details.
- 7. Use the mapping table to find the relationship between the claim, driver, and vehicles.
- 8. Use the mapping table to find the relationship between the policy, driver, and vehicles.

### 19.2.6.1 About Property and Casualty Contract Dimension Tables

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For the description of Policy Dimension, see the chapter Policy Dimension Table.

Assumed Policy Summary stores the detailed information elements of insurance policies that are not directly written or issued by the insurance company. In the Contracts table, if the value of the Direct Assumed Indicator column is A, then Fact Assumed Policy Summary tables are populated.

Property and Casualty Contract Dimension table names and their description are given here.

Table 120: Property and Casualty Contract Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Dimension	This table stores the list of all policies issued by the insurer.
Assumed Policy Dimension	This table stores the assumed policy details.
Vehicle Dimension	Stores the vehicle details included in the policies and claims.
Vehicle Type Dimension	This table stores the vehicle type details. Sample values are SUV, Car, Truck, and so on.
Vehicle Body Type Dimension	Stores the vehicle body type details. There are different sets of values for different types of vehicles. For example, values can be a two-door sedan, two-door hatchback, five-door sedan, and so on.
Vehicle Rating Dimension	Stores the vehicle rating details. Even when the vehicle ratings are prepared internally, they are handled through a common underwriter or rating agencies.
Vehicle Tonage Capacity Dimension	Stores the tonnage capacity rating details. For different jurisdictions, there are different ratings and groupings of tonnage capacity.
Vehicle Seat Belt Type Dimension	Stores the seat belt details available in the vehicle. Sample values: Active, None, PassBoth, PassDrv, and SeatAir.
Vehicle Damage Type Dimension	Stores the nature or type of vehicle damage as provided by the inspection conducting party.  Sample values: BUMPF, RFELF, RFERF, RGRIL, RHOOD, ROOF, and so on.
Vehicle Engine Type Dimension	Stores the engine type details. Sample values: D, E, G, H, N, O, P, TD, and TG.
Vehicle Lease Type Dimension	Stores the ownership or leased status details of the vehicle.  Sample values: L, N, and O.
Vehicle Purpose Dimension	Stores the code details that identify the predominant use of the vehicle.  Sample values: AC, BU, CL, CM, COM, CP, DC, DO, DU, DW, E, FH, FM, G, OT, PL, PS, and so on.
Vehicle Tyre Type Dimension	Stores the code details that identify the tire suitable for the vehicle.  Sample values: Basic, Discount, and Surcharged.
Driver Dimension	Stores the basic details of the vehicle driver such as name, date of birth, gender, and so on.
Driver License Dimension	Stores the license and eligibility details of the driver with the type of goods in the carriage.
Driving License Status Dimension	Stores the license status details of the driver. Sample values: A, N, P, AP, and T.
Insurance Driver Status Dimension	Stores the insurance driver status code details. Sample values: DD, E, N, and U.
Inspection Status Dimension	Stores the code details that indicate the vehicle inspection status.

Logical Dimension Table Name	Dimension Table Description
	Sample values: 3 is inspection completed on a timely basis, damage; 4 is inspection not completed on a timely basis resulting in a gap in coverage, damage, and so on.
Vehicle Inspection Exempt Reason Dimension	Stores the code details that indicate the reason the vehicle was exempt from inspection.
	Sample values: A is a new vehicle from a dealer with a bill of sale or RMV1, B if the Applicant qualifies as an existing customer, and so on.
Vehicle Interior Material Type Dimension	Stores the code details that indicate the material type used in the vehicle.
	Sample values: CLOTH, LEATH, OT, and VINYL.
Vehicle Operator Experience Dimension	Stores the code details that describe the experience required for the vehicle operators or drivers.
	Sample values: NOLL, NONE, NPLL, and POLL.
Vehicle Performance Type Dimension	Stores the code details that indicate the vehicle performance level.
	Sample values: BASIC, H, INMDT, P, and S.

The mapping details for the Property and Casualty Contract Dimension tables are given here.

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For mapping information about Policy Dimension, see the chapter Policy Dimension Table.

Table 121: The mapping details for the Property and Casualty Contract Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
224	STG_PROP_CASUAL TY_CONTRACTS_V	Stage Property Casualty Contracts View	DIM_POLICY	Policy Dimension
620	VW_STG_PROP_CAS UALTY_CONTRACTS	Stage Property Casualty Contracts View	DIM_ASSUMED_POLI CY	Assumed Policy Dimension
256	STG_VEHICLE_MAST ER	Stage Vehicle Master	DIM_VEHICLE	Vehicle Dimension
366	STG_VEHICLE_TYPE _MASTER	Stage Vehicle Type Master	DIM_VEHICLE_TYPE	Vehicle Type Dimension
688	STG_VEHICLE_BODY _TYPE_MASTER	Stage Vehicle Body Type Master	DIM_VEHICLE_BODY _TYPE	Vehicle Body Type Dimension
689	STG_VEHICLE_RATI NG_MASTER	Stage Vehicle Rating Master	DIM_VEHICLE_RATI NG	Vehicle Rating Dimension
690	STG_VEH_TONAGE_ CAPACITY_MASTER	Stage Vehicle Tonage Capacity Master	DIM_VEHICLE_TONA GE_CAPACITY	Vehicle Tonage Capacity Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
774	STG_VEH_SEAT_BEL T_TYPE_MASTER	Stage Vehicle Seat Belt Type Master	DIM_VEH_SEAT_BEL T_TYPE	Vehicle Seat Belt Type Dimension
775	STG_VEHICLE_DAM AGE_TYPE_MASTER	Stage Vehicle Damage Type Master	DIM_VEHICLE_DAM AGE_TYPE	Vehicle Damage Type Dimension
776	STG_VEHICLE_ENGI NE_TYPE_MASTER	Stage Vehicle Engine Type Master	DIM_VEHICLE_ENGI NE_TYPE	Vehicle Engine Type Dimension
777	STG_VEHICLE_LEAS E_TYPE_MASTER	Stage Vehicle Lease Type Master	DIM_VEHICLE_LEAS E_TYPE	Vehicle Lease Type Dimension
778	STG_VEHCILE_PURP OSE_MASTER	Stage Vehicle Purpose Master	DIM_VEHICLE_PURP OSE	Vehicle Purpose Dimension
779	STG_VEHICLE_TYRE _TYPE_MASTER	Stage Vehicle Tyre Type Master	DIM_VEHICLE_TYRE _TYPE	Vehicle Tyre Type Dimension
765	STG_PARTY_MASTE R	Stage Party Master	DIM_DRIVER	Driver Dimension
766	STG_DRIVER_LICENS E_MASTER	Stage Driver License Master	DIM_DRIVER_LICENS E	Driver License Dimension
767	STG_DRIVING_LIC_S TATUS_MASTER	Stage Driving License Status Master	DIM_DRIVING_LIC_S TATUS	Driving License Status Dimension
768	STG_INS_DRIVER_ST ATUS_MASTER	Stage Insurance Driver Status Master	DIM_INS_DRIVER_ST ATUS	Insurance Driver Status Dimension
769	STG_INSPECTION_S TATUS_MASTER	Stage Inspection Status Master	DIM_INSPECTION_S TATUS	Inspection Status Dimension
770	STG_VEH_INSP_EXM PT_RSN_MASTER	Stage Vehicle Inspection Exemption Reason Master	DIM_VEH_INSP_EXM PT_RSN	Vehicle Inspection Exempt Reason Dimension
771	STG_VEH_INTRR_M AT_TYPE_MASTER	Stage Vehicle Interior Material Type Master	DIM_VEH_INTRR_MA T_TYPE	Vehicle Interior Material Type Dimension
772	STG_VEH_OPERATR _EXPRNCE_MASTER	Stage Vehicle Operator Experience Master	DIM_VEH_OPERATR _EXPRNCE	Vehicle Operator Experience Dimension
773	STG_VEH_PERFRMA NCE_TYPE_MASTER	Stage Vehicle Performance Type Master	DIM_VEH_PERFRMA NCE_TYPE	Vehicle Performance Type Dimension

### 19.2.6.2 About Property and Casualty Contract T2Ts (Result Tables)

**NOTE** In the Fact Common Policy Summary tables, if the value of

V\_DIRECT\_ASSUMED\_RI\_IND is D or NULL or any other value apart from A, then Fact Common Policy Summary T2Ts are populated. Here, D is Direct Contracts,

and A is Assumed Contracts.

In the Contracts tables, if the value of V\_DIRECT\_ASSUMED\_RI\_IND is A, then NOTE

Fact Assumed Policy Summary T2Ts are populated. Here, A is Assumed

Contracts.

Property and Casualty Contract T2Ts and their description are given here.

Table 122: Property and Casualty Contract T2Ts and their description

T2T Name	T2T Description
T2T_FCPS_STG_PROP_CASUALTY_CON TRACTS	This T2T stores details of policy related to property and casualty contracts.
T2T_FAPS_STG_PROP_CASUALTY_CON TRACTS	This T2T stores details of policy related to property and casualty contracts.
T2T_FCT_CLAIM_DRIVER_VEHICLE_MAP	Stores the relationship details between the claim, driver, and vehicles.
T2T_FCT_POLICY_DRIVER_VEHICLE_MA P	Stores the relationship details between the policy, driver, and vehicles.
T2T_FCT_POLICY_VEHICLE_RATING_DT LS	Stores the vehicle rating details. Even when the vehicle ratings are prepared internally, they are handled through a common underwriter or rating agencies.
T2T_FCT_DRIVER_LICENSE_DETAILS	Stores the basic details of the vehicle driver.
T2T_FCT_DRIVER_DETAILS	Stores the license details of the driver.
T2T_FCT_VEHICLE_INSPECTION_DETAIL S	Stores the vehicle inspection details for the purpose of insurance renewal, cancellation, or for any claims made.

The mapping details for Life Insurance Contract T2Ts and their description are given here.

Table 123: The mapping details for Life Insurance Contract T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PROP_CASU ALTY_CONTRAC TS	Stage Property Casualty Contracts	FCT_COMMON_P OLICY_SUMMARY	Fact Common Policy Summary	T2T_FCPS_STG_PROP_C ASUALTY_CONTRACTS
STG_PROP_CASU ALTY_CONTRAC TS	Stage Property Casualty Contracts	FCT_ASSUMED_P OLICY_SUMMARY	Fact Assumed Policy Summary	T2T_FAPS_STG_PROP_C ASUALTY_CONTRACTS

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_DRIV ER_VEHICLE_MA P	Stage Claim Driver Vehicle Map	FCT_CLAIM_DRIVE R_VEHICLE_MAP	Fact Claim Driver Vehicle Map	T2T_FCT_CLAIM_DRIVER _VEHICLE_MAP
STG_POLICY_DRI VER_VEHICLE_M AP	Stage Policy Driver Vehicle Map	FCT_POLICY_DRIV ER_VEHICLE_MAP	Fact Policy Driver Vehicle Map	T2T_FCT_POLICY_DRIVE R_VEHICLE_MAP
STG_POLICY_VE HICLE_RATING_D TLS	Stage Policy Vehicle Rating Details	FCT_POLICY_VEHI CLE_RATING_DTL S	Fact Policy Vehicle Rating Details	T2T_FCT_POLICY_VEHIC LE_RATING_DTLS
STG_DRIVER_DET AILS	Stage Driver Details	FCT_DRIVER_DET AILS	Fact Driver Details	T2T_FCT_DRIVER_DETAI LS
STG_DRIVER_LIC ENSE_DETAILS	Stage Driver License Details	FCT_DRIVER_LICE NSE_DETAILS	Fact Driver License Details	T2T_FCT_DRIVER_LICEN SE_DETAILS
STG_VEHICLE_IN SPECTION_DETAI LS	Stage Vehicle Inspection Details	FCT_VEHICLE_INS PECTION_DETAILS	Fact Vehicle Inspection Details	T2T_FCT_VEHICLE_INSPE CTION_DETAILS

#### **Retirement Contract Tables 19.2.**7

Retirement contracts are insurance and savings plans that help an individual to create a corpus for their future during the policy term. On maturity (retirement), a percentage amount of the accumulated corpus can be withdrawn as a lump sum and the rest in parts in the form of a pension.

#### **About Retirement Contract Dimension Tables** 19.2.7.1

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For the description of Policy Dimension, see the chapter Policy Dimension Table.

Assumed Policy Summary stores the detailed information elements of insurance policies that are not directly written or issued by the insurance company. In the Contracts table, if the value of the Direct Assumed Indicator column is A, then Fact Assumed Policy Summary tables are populated.

Retirement Contract Dimension table names and their description are given here.

Table 124: Retirement Contract Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Dimension	This table stores the list of all policies issued by the insurer.
Assumed Policy Dimension	This table stores the assumed policy details.

The mapping details for the Retirement Contract Dimension tables are given here.

Common Policy Summary is also a part of the Policy Dimension table (DIM\_POLICY). For mapping information about Policy Dimension, see the chapter Policy Dimension Table.

Table 125: The mapping details for the Retirement Contract Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
634	STG_RETIREMENT_A CCOUNTS_V	Stage Retirement Accounts View	DIM_POLICY	Policy Dimension
619	VW_STG_RETIREME NT_ACCOUNTS	Stage Retirement Accounts View	DIM_ASSUMED_POLI CY	Assumed Policy Dimension

### 19.2.7.2 About Retirement Contract T2Ts (Result Tables)

**NOTE** 

NOTE	In the Fact Common Policy Summary tables, if the value of V_DIRECT_ASSUMED_RI_IND is D or NULL or any other value apart from A, then Fact Common Policy Summary T2Ts are populated. Here, D is Direct Contracts, and A is Assumed Contracts.
	and A is Assumed Contracts.

In the Contracts tables, if the value of V\_DIRECT\_ASSUMED\_RI\_IND is A, then Fact Assumed Policy Summary T2Ts are populated. Here, A is Assumed Contracts.

Retirement Contract T2Ts and their description are given here.

Table 126: Retirement Contract T2Ts and their description

T2T Name	T2T Description
T2T_FCPS_STG_RETIREMENT_ACCOUN TS	This T2T stores details of policy related to retirement accounts.
T2T_FAPS_STG_RETIREMENT_ACCOUN TS	This T2T stores investment details of retirement savings, which is used by individuals to earn and earmark funds.

The mapping details for Retirement Contract T2Ts is given here.

Table 127: The mapping details for Retirement Contract T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_RETIREMEN	Stage Retirement	FCT_COMMON_P	Fact Common	T2T_FCPS_STG_RETIREM
T_ACCOUNTS	Accounts	OLICY_SUMMARY	Policy Summary	ENT_ACCOUNTS
STG_RETIREMEN	Stage Retirement	FCT_ASSUMED_P	Fact Assumed	T2T_FAPS_STG_RETIREM
T_ACCOUNTS	Accounts	OLICY_SUMMARY	Policy Summary	ENT_ACCOUNTS

#### **Coverage Tables** 19.3

The Policy Coverage table stores the list of all coverages and amounts set by the Insurer.

### **Topics:**

- **About Policy Coverage Dimension Tables**
- About Policy Coverage T2T (Result Table)
- **Embedded Options Tables**

#### **About Policy Coverage Dimension Tables** 19.3.1

Policy Coverage Dimension table names and their description are given here.

Table 128: Policy Coverage Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Insurance Age Amount Product Dimension	This table stores the details of the insurance age amount product code. This table is used to define any age ranges supported, and minimum or maximum amounts, units or percentages that are available for that particular age range. The minimum and maximum ages represented in the collection of Age Amount Products at this level must follow certain defined rules.
Age Amount Product Measure Dimension	This table stores the details of Age Amount Product Measures.

The mapping details for the Policy Coverage Dimension tables are given here.

Table 129: The mapping details for the Policy Coverage Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
727	STG_INS_AGE_AMT_ PRODUCT_MASTER	Stage Insurance Age Amount Product Master	DIM_INS_AGE_AMT_ PRODUCT	Insurance Age Amount Product Dimension
728	STG_AGE_AMT_PRO D_MESR_MASTER	Stage Age Amount Product Measure Master	DIM_AGE_AMT_PRO D_MESR	Age Amount Product Measure Dimension

#### **About Policy Coverage T2T (Result Table)** 19.3.2

Policy Coverage T2Ts and their description are given here.

Table 130: Policy Coverage T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POLICY_COVERAGES	This T2T stores policy coverages details. A policy can have multiple coverages.
T2T_FCT_POLICY_COVERG_BASIS_DTL	This T2T stores the coverage basis value for a given policy.
T2T_FCT_INS_AGE_AMT_PRODUCT_DEF	This T2T stores the details of the Insurance Age Amount Product. This table is used to define any age ranges supported, and minimum or maximum amounts, units or percentages that are available for that particular age range. The minimum and maximum ages represented in the collection of Age Amount Products at this level must follow certain defined rules.
T2T_FCT_INS_AGE_AMT_PRODUCT_TABLE	This table stores the details of the Insurance Age Amount Product. This table is used to define any age ranges supported, and minimum or maximum amounts, units or percentages that are available for that particular age range. This table holds the values defined as per the insurance age amount product definition table.

The mapping details for the Policy Coverage T2Ts are given here.

Table 131: The mapping details for the Policy Coverage T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_CO VERAGES	Stage Policy Coverages	FCT_POLICY_COV ERAGES	Fact Policy Coverages	T2T_FCT_POLICY_COVER AGES
STG_POLICY_CO VERG_BASIS_DTL	Stage Policy Coverage Basis Detail	FCT_POLICY_COV ERG_BASIS_DTL	Fact Policy Coverage Basis Detail	T2T_FCT_POLICY_COVER G_BASIS_DTL
STG_INS_AGE_A MT_PRODUCT_D EF	Stage Insurance Age Amount Product Definition	FCT_INS_AGE_AM T_PRODUCT_DEF	Fact Insurance Age Amount Product Definition	T2T_FCT_INS_AGE_AMT_ PRODUCT_DEF
STG_INS_AGE_A MT_PRODUCT_T ABLE	Stage Insurance Age Amount Product Table	FCT_INS_AGE_AM T_PRODUCT_TABL E	Fact Insurance Age Amount Product Table	T2T_FCT_INS_AGE_AMT_ PRODUCT_TABLE

#### **Embedded Options Tables** 19.3.3

This section provides information about the Embedded Options table.

#### **About Embedded Options T2T (Result Table)** 19.3.3.1

Embedded Options T2T and its description is given here.

Table 132: Embedded Options T2T and its description

T2T Name	T2T Description
T2T_FCT_EMBEDDED_OPTIONS_SCHEDULE	This T2T stores the details of schedule embedded options of interest rate instruments. An embedded option is an inseparable part of another instrument and does not trade on its own.

The mapping details for the Embedded Options T2T is given here.

Table 133: The mapping details for the Embedded Options T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_EMBEDDED_ OPTIONS_SCHEDU LE	Stage Embedded Options Schedule	FCT_EMBEDDED_OP TIONS_SCHEDULE	Fact Embedded Options Schedule	T2T_FCT_EMBEDDE D_OPTIONS_SCHED ULE

# 19.4 Insurance Participation Tables

This section provides information about the Insurance Participation tables.

# 19.4.1 Using Stage Party Insurance Policy Role Map T2T (Result Table)

The Party Insurance Policy Role Map table stores information related to different policies that are taken by a Party.

**NOTE** Load STG\_PARTY\_INS\_POLICY\_ROLE\_MAP with all customer records and Party Role must be 'CUSTOMER'.

The mapping details to populate the Party Insurance Policy Role Map T2T is given here.

Table 134: The mapping details to populate the Party Insurance Policy Role Map T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_INS _POLICY_ROLE_ MAP	Stage Party Insurance Policy Role Map	FCT_PARTY_INS_P OLICY_ROLE_MAP	Fact Party Insurance Policy Role Map	T2T_FCT_PARTY_INS_ POLICY_ROLE_MAP

# 19.4.2 About Insurance Participation T2T (Result Table)

Insurance Participation T2T and its description is given here.

Table 135: Insurance Participation T2T and its description

T2T Name	T2T Description
T2T_FCT_INSURANCE_PARTCPTN_DTLS	This T2T stores the details of multiple insurers who come together to provide reinsurance to Insurance companies. Their respective details of sharing and participation are stored in this table.

The mapping details for the Insurance Participation T2T is given here.

Table 136: The mapping details for the Insurance Participation T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INSURANCE _PARTCPTN_DTL S	Stage Insurance Participation Details	FCT_INSURANCE_ PARTCPTN_DTLS	Fact Insurance Participation Details	T2T_FCT_INSURANCE_P ARTCPTN_DTLS

# 19.5 Supplemental Data

Supplemental Data refers to the additional and contextual information applicable to only certain insurance contracts. This consists of primarily two information sets namely group insurance details and policy schedules.

#### **Topics:**

- Group Beneficiary Tables
- Policy Schedules Table
- Policy and Funds Tables
- Policy Loans Tables
- Policy Conversion Table
- Special Events Tables

## 19.5.1 Group Beneficiary Tables

Group Insurance refers to insurance that covers a defined group of people, such as employees of a company or members of a particular profession, typically against illness or death.

This is the conceptual model of the Group Insurance Policies or Contracts.

Conceptual Model of Group Insurance Policies or Contracts

Policy or Contract

Policy Coverages

Policy Supplemental Data

Policy Funds

Policy Life Insurance Contracts

Policy Coverages

Policy Coverages

Policy Funds

Figure 92: The conceptual model of the Group Insurance Policies or Contracts

### 19.5.1.1 About Group Beneficiary Dimension Table

Group Beneficiary Dimension table name and its description are given here.

Table 137: Group Beneficiary Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Beneficiary Dimension	This table stores beneficiary details.

The mapping details for the Reinsurance Contracts Dimension table is given here.

Table 138: The mapping details for the Reinsurance Contracts Dimension table

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
672	STG_PARTY_MAS TER	Stage Party Master	DIM_BENEFICIARY	Beneficiary Dimension

### 19.5.1.2 About Group Policy Beneficiary T2Ts (Result Tables)

The Group Policy Beneficiary T2Ts with descriptions are as follows.

Table 139: The Group Policy Beneficiary T2Ts with descriptions

T2T Name	T2T Description
T2T_FCT_GRPINS_POL_BENFCIARY_DTLS	Stores group insurance policy beneficiary details.
T2T_FGPS_STG_GRPINS_POLICY_SUMMARY	Stores the Group Insurance plan details.
T2T_FGPS_STG_GRPINS_POL_BENFCIARY_DT LS	Stores the count of the beneficiaries based on the value in the source flag column.

The mapping details for the Group Policy Beneficiary T2Ts are as follows.

Table 140: The mapping details for the Group Policy Beneficiary T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_GRPINS_PO L_BENFCIARY_DT LS	Stage Groupings Policy Beneficiary Details	FCT_GRPINS_POL_ BENFCIARY_DTLS	Fact Groupings Policy Beneficiary Details	T2T_FCT_GRPINS_POL_ BENFCIARY_DTLS
STG_GRPINS_PO LICY_SUMMARY	Stage Group Insurance Policy Summary	FCT_GRPINS_POLI CY_SUMMARY	Fact Group Insurance Policy Summary	T2T_FGPS_STG_GRPINS _POLICY_SUMMARY
STG_GRPINS_PO L_BENFCIARY_DT LS	Stage Groupings Policy Beneficiary Details	FCT_GRPINS_POLI CY_SUMMARY	Fact Group Insurance Policy Summary	T2T_FGPS_STG_GRPINS _POL_BENFCIARY_DTLS

### 19.5.1.2.1 Data Population in the FCT\_GRPINS\_POLICY\_SUMMARY Table

The two ways to populate the data in the FCT\_GRPINS\_POLICY\_SUMMARY table are:

- The data population through the T2T\_FGPS\_STG\_GRPINS\_POLICY\_SUMMARY, which is at the Policy Summary level.
- The data population through the T2T\_FGPS\_STG\_GRPINS\_POL\_BENFCIARY\_DTLS. The data can be populated for the count at the policy or beneficiary level.

Figure 93: The FCT\_GRPINS\_POLICY\_SUMMARY table and its source

Source_Table_Name	Source_Col_Name	Target_Table_Name	Target_Col_Name
	f_employee_wfh_flag		N_No_Of_Employess_Wfh
	f_attrorneys_present_flag		N_No_Of_Attorneys
	f_emp_exempt_frm_plan_flag		N_No_Of_Exempt_Employees
	f_emp_non_exempt_frm_plan_flag		N_No_Of_Non_Exempt_Employees
	f_employee_work_abroad_flag		N_No_Of_Employees_Abroad
	f_employee_work_local_loc_flag		N_No_Of_Employees_Local
	f_Employment_Contract_flag		N_No_Of_Employment_Contracts
	f_Full_time_employee_flag	Fct_Grpins_policy_summary	N_Total_No_Of_Ft_Employees
	f_indpndt_contractors_flag		N_No_Of_Indpndt_Contractors
	f_Leased_employee_flag		N_No_Of_Leased_Employees
Sta Cenine Bol Bonfeign, Dtle	f_Non_Profssnl_Emplyees_flag f_Officers_present_flag		N_No_Of_Non_Profssnl_Emplyees
stg_drpins_Foi_beniclary_btis	f_Officers_present_flag		N_No_Of_Officers
	f_part_time_employee_flag		N_Total_No_Of_Pt_Employees
	f_Partners_present_flag		N_No_Of_Partners
	f_Principals_present_flag		N_No_Of_Principals
	f_Profssnl_Emplyees_flag		N_No_Of_Profssnl_Emplyees
	f_Resigned_employee_flag		N_No_Of_Resigned_Employees
	f_Seasonal_employee_flag		N_No_Of_Seasonal_Employees
	f_Temporary_employee_flag		N_No_Of_Temporary_Employees
	f_Terminated_employee_flag		N_No_Of_Terminated_Employees
	f_Unionized_employee_flag		N_No_Of_Unionized_Employees
	f_Volunteer_employee_flag		N_No_Of_Volunteer_Employees

This is an illustration of data population in the FCT\_GRPINS\_POLICY\_SUMMARY table:

Figure 94: An illustration of input data sourcing for data population in the FCT\_GRPINS\_POLICY\_SUMMARY table

Input	Input						
Table Name	STG_GRPIN S_POL_BEN FCIARY_DTL S		STG_GRPINS _POLICY_SU MMARY	STG_LIFE_I NS_CONTR ACTS		STG_HEAL TH_INS_CO NTRACTS	
Column Name	V_ACCOUN T_NUMBER	F_EMPLOY EE_WFH_F LAG	V_GROUP_IN S_POLICY_ID	V_ACCOUN T_NUMBER	V_GROUP _POLICY_I D	V_ACCOUN T_NUMBE R	V_GROUP_ POLICY_ID
Policy 1	Life001	Υ	Oracle001	Life001	Oracle001	-	-
Policy 2	Life002	Υ	Oracle001	Life002	Oracle001	-	-
Policy 3	Health001	N	Oracle002	-	-	Health001	Oracle002
Policy 4	Health002	Υ	Oracle002	-	-	Health002	Oracle002

### Input:

For each Policy, the data for the input column STG\_GRPINS\_POL\_BENFCIARY\_DTLS.V\_ACCOUNT\_NUMBER is retrieved from the source column (Policy

type) STG\_LIFE\_INS\_CONTRACTS. V\_ACCOUNT\_NUMBER or STG\_HEALTH\_INS\_CONTRACTS.V\_ACCOUNT\_NUMBER, based on the Policy ID column V\_GROUP\_INS\_POLICY\_ID.

The total count of different policies is retrieved from different source columns STG\_LIFE\_INS\_CONTRACTS.V\_GROUP\_POLICY\_ID and STG\_HEALTH\_INS\_CONTRACTS. V\_GROUP\_POLICY\_ID into the input column STG\_GRPINS\_POLICY\_SUMMARY.V\_GROUP\_INS\_POLICY\_ID.

Table 141: Output data population in the FCT\_GRPINS\_POLICY\_SUMMARY table

Output		
Table Name	STG_GRPINS_POLICY_SUMMARY	FCT_GRPINS_POLICY_SUMMARY
Column Name	V_GROUP_INS_POLICY_ID	N_NO_OF_EMPLOYESS_WFH
Summation of WFH	Oracle001	2
employees (only Y)	Oracle002	1

### **Output:**

For the data in the input column STG\_GRPINS\_POL\_BENFCIARY\_DTLS.V\_ACCOUNT\_NUMBER, when the flag STG\_GRPINS\_POL\_BENFCIARY\_DTLS.F\_EMPLOYEE\_WFH\_FLAG is Y then the counter N\_NO\_OF\_EMPLOYESS\_WFH increments by 1 in the target column FCT\_GRPINS\_POLICY\_SUMMARY.N\_NO\_OF\_EMPLOYESS\_WFH for different Policy IDs V\_GROUP\_INS\_POLICY\_ID.

#### For example:

#### Input:

For Policy 1, the data Life001 for the input column (STG\_GRPINS\_POL\_BENFCIARY\_DTLS.V\_ACCOUNT\_NUMBER) is retrieved from the source column STG\_LIFE\_INS\_CONTRACTS. V\_ACCOUNT\_NUMBER (Life001), based on the Policy ID Oracle001 (STG\_LIFE\_INS\_CONTRACTS.V\_GROUP\_INS\_POLICY\_ID). This procedure is repeated for Policy 2, Policy 3, and Policy 4.

The total count (1+1+0+1) of different policies (Policy 1, Policy 2, Policy 3, and Policy 4) is retrieved from different source columns Oracle001 (STG\_LIFE\_INS\_CONTRACTS.V\_GROUP\_POLICY\_ID) and Oracle002 (STG\_HEALTH\_INS\_CONTRACTS.V\_GROUP\_POLICY\_ID) into the input column STG\_GRPINS\_POLICY\_SUMMARY.V\_GROUP\_INS\_POLICY\_ID (Oracle001, Oracle001, O, Oracle002).

### **Output:**

For data (Life001, Life002, Health001, Health002) in the input column (STG\_GRPINS\_POL\_BENFCIARY\_DTLS.V\_ACCOUNT\_NUMBER), when the flag (STG\_GRPINS\_POL\_BENFCIARY\_DTLS.F\_EMPLOYEE\_WFH\_FLAG) is Y, then the counter (N\_NO\_OF\_EMPLOYESS\_WFH) increments by 1 in the target column FCT\_GRPINS\_POLICY\_SUMMARY.N\_NO\_OF\_EMPLOYESS\_WFH (2+1) for different Policy IDs V\_GROUP\_INS\_POLICY\_ID (Oracle001, Oracle002).

## 19.5.2 Policy Schedules Table

Policy Schedules refers to the agreed non-linear premium and benefit schedules associated with the insurance contracts. For example, step up Annuity Contracts, and Term Life Insurance, where benefits are increasing or decreasing with the remaining term of the contract. Agreed schedules can be stored in this entity.

### 19.5.2.1 About Policy Schedules T2T (Result Table)

Policy Schedules T2T and its description is given here.

Table 142: Policy Schedules T2T and its description

T2T Name	T2T Description
T2T_FCT_POLICY_SCHEDULES	This T2T stores the details of policy schedules. Policy Schedules refer to the premium and sum insured for each policy year until policy maturity. This is used in case of increasing or decreasing the benefit or Premium payments associated with a policy.

The mapping details for the Policy Schedules T2T is given here.

Table 143: The mapping details for the Policy Schedules T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_SC	Stage Policy	FCT_POLICY_SCH	Fact Policy	T2T_FCT_POLICY_SCHE DULES
HEDULES	Schedules	EDULES	Schedules	

# 19.5.3 Policy and Funds Tables

Policy Funds refers to the investment made by the policyholder as part of the insurance contract and significant market risk is borne by the policyholder.

### 19.5.3.1 About Policy and Funds T2T (Result Table)

Policy and Funds T2Ts and their description are given here.

Table 144: Policy and Funds T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POLICY_FUNDS	This T2T stores the policy-wise fund details. This covers units invested for each fund, total amount invested (current value of an investment as of today), and so on.
T2T_FCT_POLICY_FUND_ALLOCATION	This T2T stores the investment allocation for a given policy, fund, and investment bucket combination. The investment amount is allocated to different funds and during different periods, which is stored in this entity. This covers the premium

T2T Name	T2T Description
	amount invested in each bucket, running total premium, and cash surrender value for each bucket.

The mapping details for the Policy and Funds T2Ts are given here.

Table 145: The mapping details for the Policy and Funds T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_FUND S	Stage Policy Funds	FCT_POLICY_FUN DS	Fact Policy Funds	T2T_FCT_POLICY_FUN DS
STG_POLICY_FUND _ALLOCATION	Stage Policy Fund Allocation	FCT_POLICY_FUN D_ALLOCATION	Fact Policy Fund Allocation	T2T_FCT_POLICY_FUN D_ALLOCATION

## 19.5.4 Policy Loans Tables

Some insurance policies allow policyholders to take the loans based on the amount accumulated to date as per the terms and conditions laid in the contract. Such loans are considered as a contract by itself in OIDF and must be loaded in stage loan contracts. This entity holds policy identifiers to link multiple loans taken under a given insurance policy.

A network of loan entities cover Stage Loan Contracts, Stage Mitigants, Stage Account Mitigant Map, Stage Account Write off Details, Stage Account Recovery details.

### 19.5.4.1 About Policy Loans T2T (Result Table)

Policy Loans T2Ts and their description is given here.

Table 146: Policy Loans T2Ts and their description

T2T Name	T2T Description
T2T_FLAS_STG_LOAN_CONTRACTS	This T2T stores the details of loans. This table includes mortgage and vehicle loans.
T2T_STG_LOANS_CAS	This T2T stores the details of loans lent by the Insurance Company to its customers.

The mapping details for the Policy Loans T2Ts are given here.

Table 147: The mapping details for the Policy Loans T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LOAN_CON	Stage Loan	FCT_LOAN_ACCO	Fact Loan Account	T2T_FLAS_STG_LOAN_C
TRACTS	Contracts	UNT_SUMMARY	Summary	ONTRACTS

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LOAN_CON TRACTS	Stage Loan Contracts	FCT_COMMON_A CCOUNT_SUMMA RY	Fact Common Account Summary	T2T_STG_LOANS_CAS

## 19.5.5 Policy Conversion Table

This table is used to store the policy details when converting one policy to another. The policy can be converted from one to multiple policies or multiple to one policy. An insurance policy with this type of provision allows the insured to switch to a different type of policy.

### 19.5.5.1 About Policy Conversion T2T (Result Table)

Policy Conversion T2T and its description is given here.

Table 148: Policy Conversion T2T and its description

T2T Name	T2T Description
T2T_FCT_POLICY_CONVERSION_DETAILS	This T2T stores the details of conversion policies. If the policy is converted from one to multiple, or vice versa.

Policy Conversion T2T and its description is given here.

Table 149: The mapping details for the Policy Conversion T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_CONV	Stage Policy	FCT_POLICY_CONV	Fact Policy	T2T_FCT_POLICY_CON
ERSION_DETAILS	Conversion Details	ERSION_DETAILS	Conversion Details	VERSION_DETAILS

# 19.5.6 Special Events Tables

Any social event such as sports, film shooting, concerts, and so on are considered as a special event. An Insurer can insure their special event under the Policy Coverages against the liabilities occurring because of the event cancellation, terrorism, liquor, the artist not showing up, and so on.

Any Party that needs insurance coverage against the liquor liabilities can obtain insurance using the Policy Coverages. The liquor liabilities coverage may be applicable as a part of the Special Event Insurance if the liquor is served at the policy covered special event venue.

## 19.5.6.1 About Special Events Dimension Table

Special Events Dimension table name and its description are mentioned in the following table.

Table 150: Special Events Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Special Event Dimension	This table stores information about the special events such as event ID and event description. Some of the examples of special events are social events such as concerts, film shooting, weddings, sports, and so on.

The mapping details for the Special Events Dimension table are mentioned in the following table.

Table 151: The mapping details for the Special Events Dimension table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
987	STG_SPECIAL_EVE	Stage Special Event	DIM_SPECIAL_EVEN	Special Event
	NT_MASTER	Master	T	Dimension

### 19.5.6.2 About Special Events T2T (Result Table)

Special Events T2T and its description are mentioned in the following table.

Table 152: Special Events T2T and its description

T2T Name	T2T Description
T2T_FCT_POLICY_COVERED_EVENT	This T2T stores the details of the event, artist, and the liabilities arising in the policy covered special events such as sports, film shooting, concerts, and so on. The liabilities can be due to the event cancellation, terrorism, liquor, the artist not showing up, and so on.
T2T_FCT_POL_COV_SPECIAL_EVENT_MAP	This T2T stores the relationships between the Policy, Coverages, and Special Events insured by the Insurer.

The mapping details for Special Events T2T are mentioned in the following table.

Table 153: The mapping details for Special Events T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_CO VERED_EVENT	Stage Policy Covered Event	FCT_POLICY_COVE RED_EVENT	Fact Policy Covered Event	T2T_FCT_POLICY_COVERE D_EVENT
STG_POL_COV_S PECIAL_EVENT_ MAP	Stage Policy Coverage Special Event Map	FCT_POL_COV_SPE CIAL_EVENT_MAP	Fact Policy Coverage Special Event Map	T2T_FCT_POL_COV_SPECI AL_EVENT_MAP

# 19.6 Reinsurance Contracts Tables

A reinsurance contract is defined as an insurance contract issued by one entity (the reinsurer) to compensate another entity for claims arising from one or more insurance contracts issued by that other entity. The requirements for the assessment of significant insurance risk in a reinsurance contract are the same as for an insurance contract. However, a reinsurance contract transfers significant insurance risk if it transfers substantially all of the insurance risk resulting from the insured portion of the underlying insurance contract, even if it does not expose the reinsurer to the possibility of a significant loss.

## 19.6.1 About Reinsurance Contracts Dimension Tables

Reinsurance Contracts Dimension table names and their description are given here.

Table 154: Reinsurance Contracts Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Insurance Reserve Function Method Dimension	This table stores the method used to calculate reserves and defines the mortality function used to calculate reserves and net premiums for valuation.  Sample values: OTHER, UNKNOWN, RESERVFUNCFCL, RESERVFUNCFUL.
Consequence Of Loss Dimension	This table stores the code that identifies the consequences of losses. Sample values: Acid burns, Amputation, Blindness, and so on.
Tax Reimbursement Calculation Method Dimension	This table stores the Tax Reimbursement Calculation Method Code details and the information about the method for calculating the portion of the Premium Taxes reimbursed to the direct insurer.  Sample values: OTHER, UNKNOWN, REINPREMTXRM12.
Insurance Reserve Calculation Basis Dimension	This table stores the Insurance Reserve Calculation Basis Code details, in which, the basis is used in calculating the standard GAAP reserve.  Sample value: OTHER.
Reinsurance Contract Type Dimension	This table stores the Reinsurance Contract Type details. Sample values: DIP is Direct Insurance Policy, RC is Reinsurance Contract, FC is Facultative Contract, and so on.
Insurance Sub Standard Policy Reserve Method Dimension	This table stores the Insurance Sub Standard Policy Reserve Method Code details, a code list from Life Reinsurance Activity Report LREACT UGP, UPP, and so on. Describes the actuarial methodology used to calculate the substandard policy reserves. For example, Net Level.
Reinsurance Accounting Basis Dimension	This table stores the Reinsurance accounting basis details, which specifies the basis of accounting for the contract. Sample values: Accident Year, Accounting Year, Calendar Year, Underwriting Year, and so on.
Insurance Reserve Calculation Method Dimension	This table stores the information about the reserve's calculation method on this coverage and is used by valuation programs to find the correct reserves for this coverage.

Logical Dimension Table Name	Dimension Table Description
	Sample values: OTHER, UNKNOWN, RESVMETHYT is 1- or 5-Year Preliminary Term.
Insurance Sub Standard Reserve Calculation Basis Dimension	This table stores the Insurance Sub Standard Reserve Calculation Basis Code details. The substandard GAAP reserve factor is applied to the amount indicated to calculate the substandard GAAP reserve amount.  Sample values: OTHER, UNKNOWN, and so on.
Contract Limit Retention Basis Dimension	This table stores the code identification details of the basis of the contract limits and retentions applicable to the claim that is reported.  Sample values: Per accident, Per event, Per occurrence, Per location, and so on.
Insurance Reserve Valuation Type Dimension	This table stores Reserve Valuation Type details. Sample values: OTHER, UNKNOWN, RESVALTPCAM is Canadian Modified CANMOD, and so on.
Insurance Retention Level Type Dimension	This table stores the Insurance Retention Level Type details and the level of retention on the coverage.  Sample values: OTHER, UNKNOWN, RETNLEVRNF is Full proportional, RETNLEVRFR is Full retention, and so on.
Reinsurance Business Origin Dimension	This table stores the Reinsurance Business Origin Code details, in which, codes specify whether the contract was directly or indirectly ceded.  Sample values: Cession, Retrocession, Coinsurance, Direct insurance.
Policy Dimension	This table stores the list of all policies issued by the insurer.

The mapping details for the Reinsurance Contracts Dimension tables are given here.

Table 155: The mapping details for the Reinsurance Contracts Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
621	STG_INS_RES_FUN C_MTHD_MASTER	Stage Insurance Reserve Function Method Master	DIM_INS_RES_FUNC _MTHD	Insurance Reserve Function Method Dimension
622	STG_CONSEQUENC E_OF_LOSS_MASTE R	Stage Consequence Of Loss Master	DIM_CONSEQUENCE _OF_LOSS	Consequence Of Loss Dimension
623	STG_TAX_REIMB_C AL_MTHD_MASTER	Stage Tax Reimbursement Calculation Method Master	DIM_TAX_REIMB_CA L_MTHD	Tax Reimbursement Calculation Method Dimension
624	STG_INS_RES_CAL_ BASIS_MASTER	Stage Insurance Reserve Calculation Basis Master	DIM_INS_RES_CAL_B ASIS	Insurance Reserve Calculation Basis Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
625	STG_RI_CONTRACT _TYPE_MASTER	Stage Reinsurance Contract Type Master	DIM_RI_CONTRACT_ TYPE	Reinsurance Contract Type Dimension
626	STG_INS_SS_POL_R ES_MTHD_MASTER	Stage Insurance Sub Standard Policy Reserve Method Master	DIM_INS_SS_POL_RE S_MTHD	Insurance Sub Standard Policy Reserve Method Dimension
627	STG_RI_ACCOUNTI NG_BASIS_MASTER	Stage Reinsurance Accounting Basis Master	DIM_RI_ACCOUNTIN G_BASIS	Reinsurance Accounting Basis Dimension
628	STG_INS_RES_CAL_ MTHD_MASTER	Stage Insurance Reserve Calculation Method Master	DIM_INS_RES_CAL_ MTHD	Insurance Reserve Calculation Method Dimension
629	STG_INS_SS_RES_B ASIS_MASTER	Stage Insurance Sub Standard Reserve Calculation Basis Master	DIM_INS_SS_RES_BA SIS	Insurance Sub Standard Reserve Calculation Basis Dimension
630	STG_CL_RETENTN_ BASIS_MASTER	Stage Contract Limit Retention Basis Master	DIM_CL_RETENTN_B ASIS	Contract Limit Retention Basis Dimension
631	STG_INS_RES_VAL N_TYPE_MASTER	Stage Insurance Reserve Valuation Type Master	DIM_INS_RES_VALN _TYPE	Insurance Reserve Valuation Type Dimension
632	STG_INS_RETN_LE VEL_TYPE_MASTER	Stage Insurance Retention Level Type Master	DIM_INS_RETN_LEV EL_TYPE	Insurance Retention Level Type Dimension
633	STG_RI_BUSINESS_ ORIGIN_MASTER	Stage Reinsurance Business Origin Master	DIM_RI_BUSINESS_O RIGIN	Reinsurance Business Origin Dimension
674	STG_REINSURANCE _CNTRCTS_ISSUED	Stage Reinsurance Contracts Issued	DIM_POLICY	Policy Dimension
675	STG_REINSURANCE _CONTRACTS_HEL D	Stage Reinsurance Contracts Held	DIM_POLICY	Policy Dimension

# 19.6.2 About Reinsurance Contracts T2Ts (Result Tables)

Reinsurance Contracts T2Ts and their description are given here.

Table 156: Reinsurance Contracts T2Ts and their description

T2T Name	T2T Description
T2T_FCT_REINSURANCE_CONTRTS_HLD	This T2T stores all the attributes of a reinsurance contract held by the entity.
T2T_FCT_REINSURANCE_CONTRTS_ISS	This T2T stores all the attributes of a reinsurance contract issued by the entity.
T2T_FCT_RI_ISSUED_PLCD_COLL_MAP	This T2T stores the mapping between the Placed Collateral and Reinsurance Contract. Reinsurers provide security to Insurance companies to make sure that they are adequately covered.
T2T_FCT_RI_HELD_MITIGANT_MAP	This T2T stores the mapping between Mitigant and Reinsurance Contract. Reinsurers provide security to Insurance Company to ensure that they are adequately covered.

The mapping details for the Reinsurance Contract T2Ts are given here.

Table 157: The mapping details for the Reinsurance Contract T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Definition Name
STG_REINSURAN CE_CONTRACTS_ HELD	Stage Reinsurance Contracts Held	FCT_REINSURANCE_ CONTRACTS_HELD	Fact Reinsurance Contracts Held	T2T_FCT_REINSURAN CE_CONTRTS_HLD
STG_REINSURAN CE_CNTRCTS_ISS UED	Stage Reinsurance Contracts Issued	FCT_REINSURANCE_ CNTRCTS_ISSUED	Fact Reinsurance Contracts Issued	T2T_FCT_REINSURAN CE_CONTRTS_ISS
STG_RI_ISSUED_ PLACED_COLL_M AP	Stage Reinsurance Issued Placed Collateral Map	FCT_RI_ISSUED_PLA CED_COLL_MAP	Fact Reinsurance Issued Placed Collateral Map	T2T_FCT_RI_ISSUED_ PLCD_COLL_MAP
STG_RI_HELD_MI TIGANT_MAP	Stage Reinsurance Held Mitigant Map	FCT_RI_HELD_MITIG ANT_MAP	Fact Reinsurance Held Mitigant Map	T2T_FCT_RI_HELD_MI TIGANT_MAP

# 19.7 Deploying Insurance Contracts Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 19.8 Populating Insurance Contracts Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- **1.** To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 19.9 Populating Insurance Contracts T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

## 19.10 Related Topics

You can see the following topics related to other function-specific tables:

- Insurance Claims Tables
- General Ledger Data and Management Reporting Tables
- Transaction Summary Tables

# 20 Policy Assets Tables

This section provides information about the Policy Assets tables in the Oracle Insurance Data Foundation application, and step-by-step instructions to use this section.

#### **Topics:**

- About Policy Assets Dimension Tables
- About Policy Assets T2Ts (Result Tables)
- <u>Dwelling Insurance and Dwelling Inspection Tables</u>
- Deploying Policy Assets Table on Hive
- Populating Policy Assets Dimension Tables
- Populating Policy Assets T2T Result Table

Policy Assets is an asset with an insurance policy. An insured asset is one for which an insurance company compensates the policyholder if the asset is damaged or destroyed. Companies and individuals have insurance policies on their assets, or at least their tangible assets, to transfer the risk associated with owning them. There are two types of Policy Asset types. The type under the movable category includes automobiles, and so on. The type under the immovable category includes real estate, equipment, and so on.

# 20.1 About Policy Assets Dimension Tables

Policy Assets Dimension table names and their description are given here.

Table 158: Policy Assets Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Hazard Risk Level Dimension	Stores code details of the Hazard Risk Level. Sample values: 1, 2, 3, and 4.
Hazard Risk Override Type Dimension	Stores code details of the Hazard Grade Override. This is a shorthand representation of the risk average degree assigned by a Rater or Underwriter to the standard Hazard Grade Code. Sample values: degree1, degree2, and degree3.
Policy Asset Sub Type Dimension	Stores details of the asset subtype of a policy. Sample values: AerationFan, AerBinHeaters, AerDuctwork, BalerSquare, and so on.
Policy Asset Valuation Type Dimension	Stores details of the code that identifies the method used to determine the policy asset value. This table uses the ValuationMethod code list. Sample values: Appraisal, CompSale, and SaleRec.
Policy Covered Asset Dimension	Stores details of the assets covered in the policy.
Policy Asset Type Dimension	Stores details of the type of asset covered in the policy. The types of policy assets are Real Estate, Equipment, Automobiles, and so on. The type under the movable category includes automobiles, and so on. The type under the immovable category includes real estate, equipment, and so on.

Logical Dimension Table Name	Dimension Table Description
Risk Qualifier Type Dimension	Stores details of the risk qualifier type that is either applicable or not for the insurance. Sample values: APT, AR, BB, CNT, DP, ED, MT, and so on.

The mapping details for the Policy Assets Dimension tables are given here.

Table 159: The mapping details for the Policy Assets Dimension tables

		<u>-</u>		
Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
801	STG_HAZARD_RIS K_LEVEL_MASTER	Stage Hazard Risk Level Master	DIM_HAZARD_RIS K_LEVEL	Hazard Risk Level Dimension
802	STG_HAZ_RISK_O VRDE_TYPE_MAST ER	Stage Hazard Risk Override Type Master	DIM_HAZ_RISK_O VRDE_TYPE	Hazard Risk Override Type Dimension
807	STG_POL_ASSET_ SUB_TYPE_MASTE R	Stage Policy Asset Sub Type Master	DIM_POL_ASSET_ SUB_TYPE	Policy Asset Sub Type Dimension
808	STG_POL_ASSET_ VAL_TYPE_MASTE R	Stage Policy Asset Valuation Type Master	DIM_POL_ASSET_ VAL_TYPE	Policy Asset Valuation Type Dimension
809	STG_POL_COV_AS SET_MASTER	Stage Policy Covered Asset Master	DIM_POL_COV_AS SET	Policy Covered Asset Dimension
810	STG_POLICY_ASSE T_TYPE_MASTER	Stage Policy Asset Type Master	DIM_POLICY_ASSE T_TYPE	Policy Asset Type Dimension
811	STG_RISK_QUALIFI ER_TYPE_MASTER	Stage Risk Qualifier Type Master	DIM_RISK_QUALIFI ER_TYPE	Risk Qualifier Type Dimension

#### **About Policy Assets T2Ts (Result Tables)** 20.2

Policy Assets T2Ts and their description are given here.

Table 160: Policy Assets T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POL_COV_ASSET_DTLS	Stores details of the assets covered in the policy.
T2T_FCT_POLICY_COV_ASSET_MAP	Stores the mapping identification information between the policy and the covered asset.

The mapping details for Policy Assets T2Ts is given here.

Table 161: The mapping details for Policy Assets T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POL_COV_A SSET_DTLS	Stage Policy Covered Asset Details	FCT_POL_COV_ASSE T_DTLS	Fact Policy Covered Asset Details	T2T_FCT_POL_COV_ASS ET_DTLS
STG_POLICY_CO V_ASSET_MAP	Stage Policy Coverage Asset Map	FCT_POLICY_COV_A SSET_MAP	Fact Policy Coverage Asset Map	T2T_FCT_POLICY_COV_ ASSET_MAP

## 20.3 Dwelling Insurance and Dwelling Inspection Tables

Dwelling Insurance consists of the tables related to Dwell and Dwell Inspection. Dwelling Insurance is a part of the insurance policy of the homeowners. Dwelling Insurance indemnifies the homeowner against any physical damage to their building due to any of the insured perils such as earthquake, fire, flood, and crime.

The Dwelling Inspection valuation is carried out at the time of purchase of a new house, renovations to the house, purchase of a new policy, and claims settlement.

#### **Topics:**

- Benefits of the Dwelling Inspection Valuation
- Role of the Dwelling Inspector in the Dwelling Inspection Valuation
- Dwelling Insurance Tables
- <u>Dwelling Inspection Tables</u>

### 20.3.1 Benefits of the Dwelling Inspection Valuation

The Dwelling Inspection valuation benefits are as follows:

- Identifies the potential risks that can cause safety issues or losses. So that they can be addressed to avoid the claims.
- Helps the Dwelling Inspector (also called as Home Inspector) to identify different areas where the insured will be eligible for the discounts on the home insurance policy.
- Ensures that the insured dwelling value is not too high or too low. So that the insured saves money.

# 20.3.2 Role of the Dwelling Inspector in the Dwelling Inspection Valuation

The Dwelling Inspector considers the following factors during an inspection:

The make and age of the house: The materials used to build the house, whether the house is
primarily made of cement, bricks, or wood, and when was the house built. Some materials are more
combustible.

- Electrical and plumbing system: If there is overloading, frayed wiring, or any potential for burst pipes. The inspector looks for exposed pipes and wiring.
- Roofing: The roof condition to see if there are several layers or if there are missing shingles, wear and tear, or holes.
- Chimneys: If the chimneys are well-maintained because the ill-maintained chimneys are a fire hazard.
- Walls and ceilings: The signs of leaks such as water spots and peeling paint.
- Water connections: The condition of rubber connecting hoses of the washing machine and dishwasher.
- Safety and security systems: The presence of fire alarms, smoke alarms, burglary alarms, dead-bolt locks, and motion sensors.
- Possible areas of liability: The presence of dogs and safety measures such as anti-slip floors.

### 20.3.3 Dwelling Insurance Tables

This section provides information about the Dwelling Insurance tables.

### 20.3.3.1 About Dwelling Insurance Dimension Tables

The Dwelling Insurance Dimension table names and their description are given here.

Table 162: Dwelling Insurance Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description	
Alarm Coverage Extent Dimension	This table stores information about the extent of the alarm coverage such as all floors, above-grade floors, all openings protected, complete safe vault, and so on. The sample values are AF, AG, AOP, CSV, FCP, FCW, PR1 System Premises Protection Grade 1, PSV, and so on.	
Alarm Type Dimension	This table stores the type of alarm information such as 24-hour security, boarded, central station, the central station with keys, fenced, locked, limited mercantile with no guard response, fire, smoke, and so on. The sample values are 24H, BD, CE, CEK, FEN, LOC, LOK, CM, FIRE, HEAT, SMOKE, and so on.	
Animal Family Dimension	This table stores information about animal families such as cats, dogs, cattle, horses, and so on.	
Building Exposure Dimension	This table stores information about the exposure section of the building such as above, above roof, diagonal, East, front, and so on. The sample values are Ab, AbRoof, Bel, Diag, E, N, NE, and so on.	
Animal Breed Dimension	This table stores information about the breed category that the animal belongs to among the cats, dogs, and so on.	
Brush Fire Zone Dimension	This table stores the information about the brush fire zones as defined by the state or the insurer manuals.	
Bullet Resistant Enclosure Dimension	This table stores information about the bullet-resistant enclosures such as bullet resisting enclosure and alarm system, bullet resisting enclosure, cage, and mantrap. The sample values are BA, BR, Cage, and Trap.	

Logical Dimension Table Name	Dimension Table Description	
Chimney Lining Dimension	This table stores information about the chimney lining such as flue tile clay, stainless steel, and so on. The sample values are Flue, NONE, OT, and Stainless Steel.	
Chimney Pipe Vent Style Dimension	This table stores information about the chimney pipe vent style such as a catalytic converter, circulating fan, heat extractor, heat reclaimer, and waste heat collector circulator. The sample values are CatConverter, CircFan, HeatExtr, HeatRecl, OT, and WHeatCollCirc.	
Class Specific Rated Dimension	This table stores the class-specific rated information such as class rated, special rated, and specifically rated. The sample values are CLR, P, and S.	
Clearance From Objects Dimension	This table stores information about the clearance from things such as heating units and pipes. The sample values are HU, Oth, and P.	
Clearance To Objects Dimension	This table stores information about the clearance to objects such as ceiling, the outer edge of openings, floor, left wall, combustibles such as furniture, drapes, wood storage, and so on. The sample values are Ceil, Combust, Edge, Flr, Front, Left, Oth, Rear, Right, Side, and W.	
Construction Type Dimension	This table stores the construction material type information such as aluminum, asbestos, asphalt, concrete block, block painted, brick, solid brownstone, cast iron, and so on. The sample values are Alu, ASB, Asp, BlkPnt, Brick, BrkCom, BrStone, Castlr, and so on.	
Crime Index Dimension	This table stores the crime index information supplied by a crime indexing service documenting the relative potential risk for the address.	
Door Lock Dimension	This table stores information about the protective device door locks such as double cylinder, deadbolt, spring, and so on. The sample values are DBLCL, DEADB, SPRNG, and so on.	
Electrical Protection Dimension	This table stores the electrical protection device information such as lightning arrestor, lightning rod, and surge arrestor. The sample values are LArrest, LRod, and SurgeArrest.	
Elevation Basis Dimension	This table stores information about the basis for determining elevation such as construction drawings, finished construction, and buildings under construction. The sample values are DRAW, FIN, and UND.	
Elevation Datum Dimension	This table stores information about the basis for determining the elevation datum such as the North American Vertical Datum of 1988, National Geodetic Vertical Datum of 1929, and so on. The sample values are NAVD, NGVD, and OTH.	
Enclosure Usage Dimension	This table stores the enclosure usage information such as access, parking, parking storage access, storage, and so on. The sample values are ACCES, OT, PARKG, PSA, and STRAG.	
Enclosure Wall Dimension	This table stores information about the enclosure wall type such as breakaway, insect screening, lattice, masonry breakaway, solid perimeter wall, and so on. The sample values are BKAWY, INSCR, LATTC, MSNBY, SLDPW, and so on.	
Equipment Storage Dimension	This table stores the details of the area where the equipment is stored such as the basement, below-elevated level, garage. The sample values are Base, Below, and Gar.	

Logical Dimension Table Name	Dimension Table Description		
Fire Extinguisher System Dimension	This table stores information about the fire extinguisher system such as dry and wet mixed systems, dry, wet, and so on. The sample values are B, D, N, O, and W.		
Fire Place Type Dimension	This table stores the fireplace type information such as embedded, gas hook up with logs, kiva, marble fireplace surround, masonry, and so on. The sample values are Emb, GH, Kiva, MarbSurrnd, Multiface, MY, ZC, and so on.		
Flood Source Dimension	This table stores the flood source information such as lake, ocean, river, stream, and so on. The sample values are L, O, R, S, and Z.		
Foundation Type Dimension	This table stores information about the mobile home foundation types such as continuous masonry, basement, crawl space, hillside foundation, pilings, parallel shear walls, walkout basement, and so on. The sample values are M, O, BS, Co, Cr, FinBas, HillFnd, Pilings, Walkout, and so on.		
Fuel Type Dimension	This table stores the fuel type information such as alcohol, battery, butane, propane, coal, electric, ethanol, gas, kerosene, and so on. The sample values are A, BT, Bu, Pro, Co, Elec, Eth, G, K, and so on.		
Heating Unit Type Dimension	This table stores the heating unit information such as acorn stove, barrel type, box stove, central heating, fireplace, fireplace with doors, forced air furnace, solid masonry, and so on. The sample values are Acorn, Barrel, Box, CEN, Fireplc, ForceAirFurn, Solid Masonry, and so on.		
Home Owner Credit Rating Dimension	This table stores the credit rating information of the homeowners. The sample values are LIGHT, MANSE, NSMKR, OPTE, and OTHER.		
Building Hydrant Type Dimension	This table stores information about the hydrant types in the dwelling vicinity. The sample values are N, NSTD, and STD.		
Building Indoor Outdoor Location Type Dimension	This table stores the building indoor and outdoor type information such as combination indoor and outdoor, indoor, and outdoor. The sample values are CombilndOut, Ind, and Out.		
Item Type Dimension	This table stores information about the items in the dwelling place such as antenna, boat equipment, combination lock, electronic data processing equipment, fire receptacle, heating unit, motor, portable accessories, safe, watercraft, and so on. The sample values are Ant, BE, CombiLock, Crane, FireRecep, HU, W, and so on.		
Mobile Home Anchoring System Dimension	This table stores the mobile home anchoring system information such as frame connectors, frame ties, ground anchors, and so on. The sample values are FConnectors, FTies, Ganchors, OT, OTT Ties, and Sand.		
Mobile Home Installation Standard Dimension	This table stores information about the mobile home installation standards such as local floodplain management standards, manufacturer's specifications, and state and (or) local building standards. The sample values are LF, MS, and SS.		
Mobile Home Tie Down Dimension	This table stores the mobile home tie down information such as chassis, over the top, and so on. The tie-down refers to the mobile home secured to the land or water bed underneath to prevent it from being swept away. The sample values are C, None, O, F, and Y.		
Mobile Home Anchor Dimension	This table stores the mobile home tie-down anchor information such as concrete slab, drive anchors, hard rock, and so on. An anchor is an object to		

Logical Dimension Table Name	Dimension Table Description
	which the mobile home is secured to prevent it from being swept away. The sample values are CS, DA, HR, OT, and SC.
Mobile Home Tie Down Straps Dimension	This table stores the mobile home tie-down straps information such as 12 steel, 14 steel, Cables, Straps, and so on. The straps here are the rope cables used to connect the mobile home to the anchor. The sample values are C2, C4, CA, OT, S2, and so on.
Mine Subsidence Response Dimension	This table stores the mine subsidence response type information. The sample values are NNOOPT, No, NOTANS, UNKN, YEND, YNOOPT, and YSPP.
Building Miscellaneous Place Dimension	This table stores the location information of the oil storage tank, hydrant municipality, neighborhood description, and cooking facilities in a mobile home such as rural protected, commercial, fire district, indoors completely above ground on a masonry floor, middle, and so on. The sample values are B, CM, FD, IAM, MI, and so on.
Dwell Occupancy Vacancy Dimension	This table stores the dwelling occupancy and vacancy information such as Estate Settlement, Foreclosure, For Sale or Lease, Structure Damaged, Under Renovation, Unoccupied, and so on. The sample values are EstateSettlement, Foreclosure, ForSaleLease, StructureDamaged, UnderRenovation, Unoccupied, UnoccupiedDuringFirst30Days, and so on.
Building Owner Landlord And Tenant Territory Dimension	This table stores the owner, landlord, and tenant (OLT) territory information defined by the user. The OLT is a liability insurance coverage form designed for those businesses where liability loss exposure (other than automobile and workers compensation) derives principally from the business premises.
Building Plumbing Type Dimension	This table stores the building plumbing material type information such as cast iron, copper, and PVC. The sample values are CI, COP, and P.
Roof Plumbing And Housekeeping Maintenance Condition Dimension	This table stores the housekeeping, plumbing, and roof condition type information such as average, below average, excellent, and good. The sample values are AV, BAVE, E, and GD.
Heat Unit Placement Dimension	This table stores the heating unit placement information such as the attached garage, basement, detached garage, exterior, main living area, main floor, workshop, and so on. The sample values are AttGar, Base, DetacGar, Ext, Main, MainFlr, Oth, and Work.
Pool Construction Dimension	This table stores information about the material type used in the pool construction such as fiberglass, reinforced concrete, and vinyl liner. The sample values are F, RCC, and VL.
Protection Class Dimension	This table stores information about the protection classes defined by the state or insurer manuals.
Protective Device Dimension	This table stores information about protective devices in the building such as (or designed for protection from) both local and central, battery, burglar, central station with keys, central, fire, humidity, police connection, standpipes, and temperature. The sample values are BLC, BT, BU, CEK, CN, FIRE, HM, PC, STANDPIPES, and TM.
Building Roof Attachment Dimension	This table stores information about the building roof attachment type such as adhesive epoxy, mortar, nail, screw, staple, structurally connected,

Logical Dimension Table Name	Dimension Table Description
	double wraps, gravity friction, and so on. The sample values are ADHESIVE, MORTAR, NAIL, SCREW, STAPLE, UN, STRUCTURE, WRAPD, and Gravity.
Roof Geometry Shape Dimension	This table stores information about the roof geometry shape, which can be defined by the user.
Rural Fire Protection District Dimension	This table stores the rural fire protection district information such as first-rate water supply and second-rate water supply.
Seen By Dimension	This table stores information about the property seen by roles such as caretaker, manager, owner, realtor, security, and so on. The sample values are CARE, MGR, OT, OWN, REAL, and SEC.
Shoreline Distance Dimension	This table stores the nearest shoreline distance information from the site location such as less than 200 feet, 200 feet to 500 feet, 500 feet to 1000 feet, greater than 1000 feet. The sample values are A, B, C, and D.
Storage Tank Content Dimension	This table stores information about the storage tank contents such as ammonia, anhydrous ammonia, dairy milk, diesel, pesticide, water, and so on. The sample values are Ammonia, AnhyAmmonia, Dairy, Diesel, Pesticide Pesticide, Water, and so on.
Stored Equipment Dimension	This table stores information about the stored equipment such as air conditioner, cistern, elevator equipment, food freezer, fuel tank, and so on. The sample values are AC, CT, EE, FF, FT, and so on.
Stove Type Dimension	This table stores information about the heating unit stove type like circulating, radiant, and so on. The sample values are C, OT, and R.
Structure Condition Dimension	This table stores the structure condition information such as broken, excellent, fair, contains gaps, good, new, poor, and so on. The sample values are Broken, Excellent, Fair, Gaps, Good, and so on.
Building Structure Type Dimension	This table stores the building structure type information such as agricultural building, airplane hangar, barn or outbuilding, dairy barn, machine shed, main house building, pool house, and so on. The sample values are AgricBuilding, AirplaneHanger, BarnOutbuilding, MachineShed, Main, and so on.
Building Surveillance Dimension	This table stores the building surveillance type information such as Closed-Circuit TV, Security Patrol, and Video. The sample values are CCTV, SecPatrol, and Video.
Insurer Territory Code Dimension	This table stores the Insurer territory information, which can be defined by the user. These codes are different from location codes.
Thimble Pass Layer Dimension	This table stores information about the things the thimble passes through such as the ceiling and wall. The sample values are Ceil and W.
Asset Usage Dimension	This table stores the asset usage type information such as add on, commercial, occasional, personal, and so on. The sample values are AO, Comm, Occ, Prim, and so on.
Watch Person Factor Dimension	This table stores the watch person factor information such as central station signals every 2 hours, central station signals every 3 hours, central station hourly registration, and so on. The sample values are C2, C3, CH, and so on.

Logical Dimension Table Name	Dimension Table Description
Water Quantity Dimension	This table stores the water supply quantity information such as 1000 to 3000 gallons, over 3000 gallons, and less than 1000 gallons. The sample values are 1000To3000, Over3000, and Under1000.
Water Source Dimension	This table stores the water source information such as hydrant, lake, swimming pool, tanker, and so on. The sample values are H, L, OT, P, PL, S, T, and W.
Waterbody Proximity Dimension	This table stores the water body proximity information such as the outside, seaward side of an ocean water barrier, inland, seacoast, tidal water, and unprotected island. The sample values are BCH, C, I, S, TidalWater, and U.
Wind Class Dimension	This table stores the wind class information such as Semi Wind Resistive, Wind Resistive, and so on. The sample values are OT, SWR, and WR.
Building Wiring Type Dimension	This table stores information about the wiring material type used in building such as copper, cloth, knob, and tube. Certain types of wiring are more prone to fire and shock. Therefore, the wiring type is an underwriting consideration. In rare circumstances, such as in the case of old homes, the wiring type changes.
Working Utilities Dimension	This table stores the working utility information such as electricity, gas, water, and so on. The sample values are Electric, Gas, OT, and Water.
Flood Zone Dimension	The table stores information about the flood zone, where the property is located. The source of this code list is the Flood Insurance Rate Map. The benefits of the National Flood Insurance Program are limited to the communities that participate in the program.
Flood Community Rate Class Dimension	This table stores the flood community rate class information used to determine the rates. The source of this code list is the Federal Emergency Management Agency (FEMA) or any other supporting federal agency. The benefits of the National Flood Insurance Program are limited to the communities that participate in the program.
Flood Community Information Source Dimension	This table stores the flood community information source details such as community official, flood map, mortgagee, and so on. The benefits of the National Flood Insurance Program are limited to communities that participate in the program. The sample values are COMMO, FLMAP, MORTG, and OT.
Flood Community Program Dimension	This table stores the information that identifies the community program type such as emergency and regular. The benefits of the National Flood Insurance Program are limited to the communities that participate in the program. The sample values are E and R.
Flood Rating Dimension	This table stores details regarding whether the flood community information is used for the policy rating, or whether the data represents more current National Flood Insurance Program (NFIP) information in a grandfathering situation that is not used for the policy rating. "Current" means the information in the aggregate is not used for the policy rating. In a grandfathering situation, this is the current NFIP data. "Rating" means the information in the aggregate is used for the policy rating. This may be the grandfathered data.
Material Type Dimension	This table stores the information about the construction material type used in the chimney, roof, roof deck and the protective material type used in the heating unit, and pipes such as stone, cement, brick-lined with fireproof

Logical Dimension Table Name	Dimension Table Description
	tiles, concrete, wood planks, reinforced concrete slab, asbestos, Fiberglass, Copper, and so on. The sample values are Stone, Cement, BrickLineWTiles, CBL, Concrete, Fct2WallChimIns, Masonry Brick, and so on.

The mapping details for the Dwelling Insurance Dimension tables are given here.

Table 163: The mapping details for the Dwelling Insurance Dimension tables

Map Reference Number	Source table name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
877	STG_ALARM_COV _EXTENT_MASTER	Stage Alarm Coverage Extent Master	DIM_ALARM_COV_ EXTENT	Alarm Coverage Extent Dimension
878	STG_ALARM_TYPE _MASTER	Stage Alarm Type Master	DIM_ALARM_TYPE	Alarm Type Dimension
879	STG_ANIMAL_FAM ILY_MASTER	Stage Animal Family Master	DIM_ANIMAL_FAM ILY	Animal Family Dimension
881	STG_BLDG_EXPOS URE_MASTER	Stage Building Exposure Master	DIM_BLDG_EXPOS URE	Building Exposure Dimension
882	STG_BREED_MAST ER	Stage Animal Breed Master	DIM_BREED	Animal Breed Dimension
883	STG_BRUSH_FIRE_ ZONE_MASTER	Stage Brush Fire Zone Master	DIM_BRUSH_FIRE_ ZONE	Brush Fire Zone Dimension
884	STG_BULLET_RESI ST_ENCL_MASTER	Stage Bullet Resistant Enclosure Master	DIM_BULLET_RESI ST_ENCL	Bullet Resistant Enclosure Dimension
885	STG_CHIMNEY_LI NING_MASTER	Stage Chimney Lining Master	DIM_CHIMNEY_LI NING	Chimney Lining Dimension
886	STG_CHIMNEY_PP VN_STYLE_MASTE R	Stage Chimney Pipe Vent Style Master	DIM_CHIMNEY_PP VN_STYLE	Chimney Pipe Vent Style Dimension
887	STG_CLASS_SPECI FIC_RTD_MASTER	Stage Class Specific Rated Master	DIM_CLASS_SPECI FIC_RTD	Class Specific Rated Dimension
888	STG_CLEARANCE_ FROM_OBJ_MAST ER	Stage Clearance From Objects Master	DIM_CLEARANCE_ FROM_OBJ	Clearance From Objects Dimension
889	STG_CLEARANCE_ TO_OBJ_MASTER	Stage Clearance To Objects Master	DIM_CLEARANCE_ TO_OBJ	Clearance To Objects Dimension
890	STG_CONSTRUCTI ON_TYPE_MASTE R	Stage Construction Type Master	DIM_CONSTRUCTI ON_TYPE	Construction Type Dimension
875	STG_CRIME_INDEX _MASTER	Stage Crime Index Master	DIM_CRIME_INDEX	Crime Index Dimension

Map Reference Number	Source table name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
892	STG_DOOR_LOCK_ MASTER	Stage Door Lock Master	DIM_DOOR_LOCK	Door Lock Dimension
893	STG_ELECTRICAL_ PROT_MASTER	Stage Electrical Protection Master	DIM_ELECTRICAL_ PROT	Electrical Protection Dimension
894	STG_ELEVATION_ BASIS_MASTER	Stage Elevation Basis Master	DIM_ELEVATION_ BASIS	Elevation Basis Dimension
895	STG_ELEVATION_ DATUM_MASTER	Stage Elevation Datum Master	DIM_ELEVATION_ DATUM	Elevation Datum Dimension
896	STG_ENCLOSURE_ USAGE_MASTER	Stage Enclosure Usage Master	DIM_ENCLOSURE_ USAGE	Enclosure Usage Dimension
897	STG_ENCLOSURE_ WALL_MASTER	Stage Enclosure Wall Master	DIM_ENCLOSURE_ WALL	Enclosure Wall Dimension
898	STG_EQUIPMENT_ STORAGE_MASTE R	Stage Equipment Storage Master	DIM_EQUIPMENT_ STORAGE	Equipment Storage Dimension
899	STG_FIRE_EXTNG_ SYSTEM_MASTER	Stage Fire Extinguisher System Master	DIM_FIRE_EXTNG_ SYSTEM	Fire Extinguisher System Dimension
900	STG_FIREPLACE_T YPE_MASTER	Stage Fire Place Type Master	DIM_FIREPLACE_T YPE	Fire Place Type Dimension
891	STG_FLOOD_SOU RCE_MASTER	Stage Flood Source Master	DIM_FLOOD_SOU RCE	Flood Source Dimension
901	STG_FOUNDATIO N_TYPE_MASTER	Stage Foundation Type Master	DIM_FOUNDATIO N_TYPE	Foundation Type Dimension
876	STG_FUEL_TYPE_ MASTER	Stage Fuel Type Master	DIM_FUEL_TYPE	Fuel Type Dimension
902	STG_HEATING_UN IT_TYPE_MASTER	Stage Heating Unit Type Master	DIM_HEATING_UN IT_TYPE	Heating Unit Type Dimension
903	STG_HOMOWNR_ CRED_RATING_MA STER	Stage Home Owner Credit Rating Master	DIM_HOMOWNR_ CRED_RATING	Home Owner Credit Rating Dimension
904	STG_BLDG_HYDR ANT_TYPE_MASTE R	Stage Building Hydrant Type Master	DIM_BLDG_HYDRA NT_TYPE	Building Hydrant Type Dimension
905	STG_BLDG_INOUT DOOR_TYPE_MAS TER	Stage Building Indoor Outdoor Location Type Master	DIM_BLDG_INOUT DOOR_TYPE	Building Indoor Outdoor Location Type Dimension
907	STG_ITEM_TYPE_ MASTER	Stage Item Type Master	DIM_ITEM_TYPE	Item Type Dimension

Map Reference Number	Source table name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
909	STG_MH_ANCHOR ING_SYSTEM_MAS TER	Stage Mobile Home Anchoring System Master	DIM_MH_ANCHOR ING_SYSTEM	Mobile Home Anchoring System Dimension
910	STG_MH_INSTALL ATION_STD_MAST ER	Stage Mobile Home Installation Standard Master	DIM_MH_INSTALL ATION_STD	Mobile Home Installation Standard Dimension
911	STG_MH_TIE_DOW N_ANCHOR_MAST ER	Stage Mobile Home Tie Down Anchor Master	DIM_MH_TIE_DOW N	Mobile Home Tie Down Dimension
912	STG_MH_TIE_DOW N_MASTER	Stage Mobile Home Tie Master	DIM_MH_TIE_DOW N_ANCHOR	Mobile Home Anchor Dimension
913	STG_MH_TIE_DOW N_STRAPS_MASTE R	Stage Mobile Home Tie Down Straps Master	DIM_MH_TIE_DOW N_STRAPS	Mobile Home Tie Down Straps Dimension
914	STG_MINE_SUBSID E_RESP_MASTER	Stage Mine Subsidence Response Master	DIM_MINE_SUBSID E_RESP	Mine Subsidence Response Dimension
915	STG_BLDG_MISC_ PLACE_MASTER	Stage Building Miscellaneous Place Master	DIM_BLDG_MISC_ PLACE	Building Miscellaneous Place Dimension
916	STG_DWELL_OCC UP_VACANCY_MA STER	Stage Dwell Occupancy Vacancy Master	DIM_DWELL_OCC UP_VACANCY	Dwell Occupancy Vacancy Dimension
917	STG_BLDG_OLT_T ERRITORY_MASTE R	Stage Building Owner Landlord Territory Master	DIM_BLDG_OLT_T ERRITORY	Building Owner Landlord And Tenant Territory Dimension
919	STG_BLDG_PLUM BING_TYPE_MAST ER	Stage Building Plumbing Type Master	DIM_BLDG_PLUM BING_TYPE	Building Plumbing Type Dimension
908	STG_MAINTENAN CE_COND_MASTE R	Stage Maintenance Condition Master	DIM_MAINTENAN CE_COND	Roof Plumbing And Housekeeping Maintenance Condition Dimension
918	STG_HEAT_UNIT_ PLACEMENT_MAS TER	Stage Heat Unit Placement Master	DIM_HEAT_UNIT_ PLACEMENT	Heat Unit Placement Dimension
920	STG_POOL_CONS TRUCT_TYPE_MAS TER	Stage Pool Construction Master	DIM_POOL_CONST RUCT_TYPE	Pool Construction Dimension
921	STG_PROTECTION _CLASS_MASTER	Stage Protection Class Master	DIM_PROTECTION _CLASS	Protection Class Dimension
922	STG_PROTECTIVE_ DEVICE_MASTER	Stage Protection Device Master	DIM_PROTECTIVE_ DEVICE	Protective Device Dimension

Map Reference Number	Source table name	Logical Stage Table Name	Dimension Table	Logical Dimension Table Name
923	STG_BLDG_ROOF_ ATTCHMNT_MAST ER	Stage Building Roof Attachment Master	DIM_BLDG_ROOF_ ATTCHMNT	Building Roof Attachment Dimension
924	STG_ROOF_GEOM ETRY_SHAPE_MAS TER	Stage Roof Geometry Shape Master	DIM_ROOF_GEOM ETRY_SHAPE	Roof Geometry Shape Dimension
925	STG_RURL_FIRE_P ROT_DIST_MASTE R	Stage Rural Fire Protection District Master	DIM_RURL_FIRE_P ROT_DIST	Rural Fire Protection District Dimension
926	STG_SEEN_BY_RO LE_MASTER	Stage Seen By Master	DIM_SEEN_BY_RO LE	Seen By Dimension
927	STG_SHORELINE_ DIST_MASTER	Stage Shoreline Distance	DIM_SHORELINE_ DIST	Shoreline Distance Dimension
928	STG_STORE_TANK _CONTENT_MAST ER	Stage Storage Tank Content Master	DIM_STORE_TANK _CONTENT	Storage Tank Content Dimension
929	STG_STORED_EQU IPMENT_MASTER	Stage Stored Equipment Master	DIM_STORED_EQU IPMENT	Stored Equipment Dimension
930	STG_STOVE_TYPE _MASTER	Stage Stove Type Master	DIM_STOVE_TYPE	Stove Type Dimension
931	STG_STRUCTURE_ CONDITION_MAST ER	Stage Structure Condition Master	DIM_STRUCTURE_ CONDITION	Structure Condition Dimension
932	STG_BLDG_STRUC TURE_TYPE_MAST ER	Stage Building Structure Type Master	DIM_BLDG_STRUC TURE_TYPE	Building Structure Type Dimension
933	STG_BLDG_SURVE ILLANCE_MASTER	Stage Building Surveillance Master	DIM_BLDG_SURVE ILLANCE	Building Surveillance Dimension
906	STG_INSURER_TER RITRY_CD_MASTE R	Stage Insurer Territory Code Master	DIM_INSURER_TER RITRY_CD	Insurer Territory Code Dimension
934	STG_THIMBLE_PA SS_LAYER_MASTE R	Stage Thimble Pass Layer Master	DIM_THIMBLE_PA SS_LAYER	Thimble Pass Layer Dimension
880	STG_ASSET_USAG E_MASTER	Stage Asset Usage Master	DIM_ASSET_USAG E	Asset Usage Dimension
935	STG_WATCH_PER SON_FACTOR_MA STER	Stage Watch Persons Factor Master	DIM_WATCH_PERS ON_FACTOR	Watch Person Factor Dimension
936	STG_WATER_QUA NTITY_MASTER	Stage Water Quantity Master	DIM_WATER_QUA NTITY	Water Quantity Dimension

Map Reference Number	Source table name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name		
937	STG_WATER_SOU RCE_MASTER	Stage Water Source Master	DIM_WATER_SOU RCE	Water Source Dimension		
938	STG_WATERBODY _PROXIMITY_MAS TER	Stage Waterbody Proximity Master	DIM_WATERBODY _PROXIMITY	Waterbody Proximity Dimension		
939	STG_WIND_CLASS _MASTER	Stage Wind Class Master	DIM_WIND_CLASS	Wind Class Dimension		
940	STG_BLDG_WIRIN G_TYPE_MASTER	Stage Building Wiring Type Master	DIM_BLDG_WIRIN G_TYPE	Building Wiring Type Dimension		
941	STG_WORKING_UT ILITIES_MASTER	Stage Working Utilities Master	DIM_WORKING_UT ILITIES	Working Utilities Dimension		
870	STG_FLOOD_ZON E_MASTER	Stage Flood Zone Master	DIM_FLOOD_ZON E	Flood Zone Dimension		
871	STG_FL_COMM_R ATE_CLASS_MAST ER	Stage Flood Community Rate Class Master	DIM_FL_COMM_R ATE_CLASS	Flood Community Rate Class Dimension		
874	STG_FL_COMM_IN FO_SOURCE_MAS TER	Stage Flood Community Info Source Master	DIM_FL_COMM_IN FO_SOURCE	Flood Community Information Source Dimension		
872	STG_FLOOD_COM M_PROGRAM_MA STER	Stage Flood Community Program Master	DIM_FLOOD_COM M_PROGRAM	Flood Community Program Dimension		
873	STG_FLOOD_RATI NG_MASTER	Stage Flood Rating Master	DIM_FLOOD_RATI NG	Flood Rating Dimension		
942	STG_MATERIAL_T YPE_MASTER	Stage Material Type Master	DIM_MATERIAL_T YPE	Material Type Dimension		

# **20.3.3.2** About Dwelling Insurance T2Ts (Result Tables)

The Dwelling Insurance T2Ts and their description are given here.

Table 164: Dwelling Insurance T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POL_COV_ASSET_EXP_DTLS	This T2T stores information about the policy coverage asset exposures.
T2T_FCT_POL_COV_ASSET_BUS_DTLS	This T2T stores information about the policy coverage asset business.
T2T_FCT_LOC_FLOOD_CRIME_DTLS	The T2T stores the flood zone details where the property is located. The source of this code list is the Flood Insurance Rate Map. The benefits of the National Flood Insurance Program are limited to the communities that participate in the program.

The mapping details for Dwelling Insurance T2Ts are given here.

Table 165: The mapping details for Dwelling Insurance T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POL_COV_A SSET_EXP_DTLS	Stage Policy Coverage Asset Exposure Details	FCT_POL_COV_ASSE T_EXP_DTLS	Fact Policy Coverage Asset Exposure Details	T2T_FCT_POL_COV_ASS ET_EXP_DTLS
STG_POL_COV_A SSET_BUS_DTLS	Stage Policy Coverage Asset Business Details	FCT_POL_COV_ASSE T_BUS_DTLS	Fact Policy Coverage Asset Business Details	T2T_FCT_POL_COV_ASS ET_BUS_DTLS
STG_LOC_FLOOD _CRIME_DTLS	Stage Location Flood Crime Details	FCT_LOC_FLOOD_C RIME_DTLS	Fact Location Flood Crime Details	T2T_FCT_LOC_FLOOD_ CRIME_DTLS

# 20.3.4 Dwelling Inspection Tables

This section provides information about the Dwelling Inspection tables.

### 20.3.4.1 About the Dwelling Inspection Dimension Tables

The Dwelling Inspection Dimension table names and their description are given here.

Table 166: Dwelling Inspection Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Air Conditioner Type Dimension	This table stores the air conditioner type information such as evaporative cooling, electric baseboard, forced air using heating ducts that are single zone, and so on. The sample values are EvapDuct, EvapNoDuct, FAHDSZ, and so on.
Construction Class Dimension	This table stores the construction class information such as custom luxury, designer, economy, economy standard, minimum, average standard builders' grade, and so on. The sample values are CUSLUX, CUSTM, ECONO, and so on.
Interior Builtins Dimension	This table stores the built-in interior information such as air exchanger, air humidifier, appliance center, bathroom heater, dishwasher, and so on. The sample values are AirExch, AirHum, ApplCtr, Dishwash, and so on.
Dwell Style Dimension	This table stores the dwelling style information such as one and three- quarter stories, two and three-quarter stories, basic, basement flat, colonial, and so on. The sample values are 13Q, 23Q, BASIC, BF, Colonial, and so on.
Dwell Construction Style Dimension	This table stores the dwell construction style information such as pre-1930, pre-1940, and standard. The sample values are Pre1930, Pre1940, and Standard.

Logical Dimension Table Name	Dimension Table Description
Dwell Evaluation Method Dimension	This table stores information about the dwell evaluation method codes such as standard, unit method, professional appraisal, full market value excluding land, and so on. The sample values are Standard, 1, 2, 3, F, and so on.
Dwell General Shape Dimension	This table stores the dwell general shape information such as L-shaped, rectangle box, T-shaped, very irregular, and so on. The sample values are Lshape, Rect, Slrreg, Tshape, and so on.
Building Storey Type Dimension	This table stores information about the number of stories in the building. The sample values are 1, 1H, 2, BILEVEL, and so on.
Building Detached Structure Dimension	This table stores information about the detached structure type such as awning, barbecue, boat dock, boathouse, boat shelter, cabana, deck, video door answering, and so on. The sample values are Awning, BBQ, BoatDock, CompactorVanityCus, and so on.
Garage Type Dimension	This table stores the garage type information such as built-in, basement, carport, masonry garage with living space above, and so on. The sample values are BI, BS, CP, MasonryLs, and so on.
Interior Primary Component Dimension	This table stores information about the interior component finish type such as ceiling construction, ceiling finish, floor finish, wall construction, and wall covering. The sample values are CeilingConstruction, CeilingFinish, FloorFinish, WallConstruction, and WallCovering.
Interior Primary Material Dimension	This table stores information about the material types used in the interior finishing such as ash plank, acoustical tile, concrete block, glass block, nylon carpet, wool carpet, ceramic tile, and so on. The sample values are AshPlnk, Atile, B, BlkGlass, CrvStud, and so on.
Porch Breezeway Dimension	This table stores the porch type information such as covered stoop, enclosed, screened porch, and so on. The sample values are CovStoop, E, Screen, and so on.
Substructure Type Dimension	This table stores the substructure type information such as the basement, basement below ground from all sides, crawl space, and slab. The sample values are BS, BSBG, CRSP, and S.
Inspection Report Source Dimension	This table stores information about the source of the inspection report (in the form of codes) such as agency inspection, authorized inspection company, certified appraisal, and so on. The sample values are 0, 1, 2, and so on.
Specialty Room Dimension	This table stores information about the specialty rooms in a building such as a ballroom, billiards, computer room, drawing room, grand salon parlor, and so on. The sample values are Ballrm, Billiards, Computer, Drawing, GrParlor, LgFoyer, and so on.
Building System Dimension	This table stores information about the building system such as the computer room, den, family room, and so on. The sample values are Computer, Den, Family, and so on.

Logical Dimension Table Name	Dimension Table Description
Primary Siding Material Dimension	This table stores information about the primary type of siding material used such as aluminum siding, beveled wood clapboards, asbestos, board, wood siding, and so on. The siding or the wall cladding is a protective material attached to the exterior side of a wall of a house or any building. These techniques of joinery are designed to prevent water from entering the walls. The sample values are A, BevWd, BrdBat, Board, LogCed, Wshakes, and so on.
Insurer Construction Class Dimension	This table stores information about the general quality of building construction. These codes may be defined by the insurer.
Detached Structure Earthquake Suitability Dimension	This table stores information about building the ground earthquake suitability for a detached structure such as firm natural, hazardous, and intermediate hazardous. The sample values are FN, HZ, and I.
Window Bars Dimension	This table stores information about the type of window bars the building is equipped such as the type for those devices that do not provide a releasable latch for emergency exit, for those devices that provide a releasable latch allowing emergency exit, and so on. The sample values are NonRelease, Release, and so on.
Earthquake Building Class Dimension	This table stores information that identifies the degree of rigidity and flexibility to withstand the seismic waves based on the building material, floor roof material, area, and the number of stories as it relates to the earthquake, and the earthquake sprinkler leakage coverage of the building.
Earthquake Retrofit Dimension	This table stores information about the retrofitting completed on the structure related to earthquakes such as structure anchored to the foundation and cripple walls braced, structure anchored to the foundation, all retrofit conditions met, and so on. The sample values are AB, AF, AL, and so on.
Earthquake Contents Grade Dimension	This table stores the industry or company-specific information that identifies the susceptibility grade for contents in the building.
Electrical Insulation Dimension	This table stores information about the electrical insulation type for the building such as cellulose, exposed fiberboard, and so on. The sample values are Cellulose, FiberglassFoam, and so on.
Windstorm Mitigation Dimension	This table stores information about the windstorm mitigation evidence or documentation of the building such as IBHS FORTIFIED for Existing Homes - Bronze-Level 1, IBHS FORTIFIED for Existing Homes - Bronze-Level 2, IBHS FORTIFIED for Existing Homes - Gold-Level 1, and Total Hip Roof. The sample values are IBHSBronzeLevel1, IBHSBronzeLevel2, IBHSGoldLevel1, TotalHipRoof, and so on.
Building Inspection Type Dimension	This table stores the building inspection type information such as appraisal, chimney, emissions, exterior paint, heating unit, replacement cost calculator or an equivalent worksheet, and so on. The sample values are Appraisal, Chimney, Emissions, ExteriorPaint, HeatingUnit, and so on.
Flood Waiting Period Dimension	This table stores information about the flood waiting period such as Lender Required No Waiting, map revision zone change from non-SPHA to SPHA - One Day, standard 30-day waiting period, Transfer - No Waiting, and so on. The sample values are LNO, LRO, MR1, S30, and TRO.

Logical Dimension Table Name	Dimension Table Description
Policy Coverage Sub Asset Dimension	This table stores information about the policy coverage sub-assets such as the specialty rooms and finished attic areas.

The mapping details for the Dwelling Inspection Dimension tables are given here.

Table 167: The mapping details for the Dwelling Inspection Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name	
943	STG_AC_TYPE_MA STER	Stage Air Conditioner Type Master	DIM_AC_TYPE	Air Conditioner Type Dimension	
944	STG_CONSTRUCTI ON_CLASS_MAST ER	Stage Construction Class Master	DIM_CONSTRUCTI ON_CLASS	Construction Class Dimension	
945	STG_INTERIOR_BU ILTINS_MASTER	Stage Interior Builtins Master	DIM_INTERIOR_BU ILTINS	Interior Builtins Dimension	
946	STG_DWELL_STYL E_MASTER	Stage Dwell Style Master	DIM_DWELL_STYL E	Dwell Style Dimension	
947	STG_DWELL_CON STR_STYLE_MAST ER	Stage Dwell Construction Style Master	DIM_DWELL_CON STR_STYLE	Dwell Construction Style Dimension	
948	STG_DWELL_EVAL _METHOD_MASTE R	Stage Dwell Evaluation Method Master	DIM_DWELL_EVAL _METHOD	Dwell Evaluation Method Dimension	
949	STG_DWELL_GENE RAL_SHAPE_MAST ER	Stage Dwell General Shape Master	DIM_DWELL_GENE RAL_SHAPE	Dwell General Shape Dimension	
950	STG_BLDG_STORE Y_TYPE_MASTER	Stage Building Storey Type Master	DIM_BLDG_STORE Y_TYPE	Building Storey Type Dimension	
951	STG_BLDG_DET_S TRUC_TYPE_MAST ER	Stage Building Detached Structure Type Master	DIM_BLDG_DET_S TRUC_TYPE	Building Detached Structure Dimension	
952	STG_GARAGE_TYP E_MASTER	Stage Garage Type Master	DIM_GARAGE_TYP E	Garage Type Dimension	
953	STG_INT_PRIMARY _COMPNNT_MAST ER	Stage Interior Primary Component Master	DIM_INT_PRIMARY _COMPNNT	Interior Primary Component Dimension	
954	STG_INT_PRIMARY _MTRL_MASTER	Stage Interior Primary Material Master	DIM_INT_PRIMARY _MTRL	Interior Primary Material Dimension	
955	STG_PORCH_BREE ZEWAY_MASTER	Stage Porch Breezeway Master	DIM_PORCH_BREE ZEWAY	Porch Breezeway Dimension	

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name	
956	STG_SUBSTRUCTU RE_TYPE_MASTER	Stage Substructure DIM_SUBSTRUCTU RE_TYPE		Substructure Type Dimension	
957	STG_INSP_REPOR T_SRC_MASTER	Stage Inspection Report Source Master	DIM_INSP_REPORT _SRC	Inspection Report Source Dimension	
958	STG_SPECIALTY_R OOM_MASTER	Stage Specialty Room	DIM_SPECIALTY_R OOM	Specialty Room Dimension	
959	STG_BLDG_SYSTE M_MASTER	Stage Building System Master	DIM_BLDG_SYSTE M	Building System Dimension	
960	STG_PRIM_SIDING _MTRL_MASTER	Stage Primary Siding Material Master	DIM_PRIM_SIDING _MTRL	Primary Siding Material Dimension	
961	STG_INS_CONST_ CLASS_MASTER	Stage Insurer Construction Class Master	DIM_INS_CONST_ CLASS	Insurer Construction Class Dimension	
962	STG_DS_QUAKE_S UITABILTY_MASTE R	Stage Detached Structure Earthquake Suitability Master	DIM_DS_QUAKE_S UITABILTY	Detached Structure Earthquake Suitability Dimension	
963	STG_WINDOW_BA RS_MASTER	Stage Window Bars Master	DIM_WINDOW_BA RS	Window Bars Dimension	
964	STG_QUAKE_BLDG _CLASS_MASTER	Stage Earthquake Building Class Master	DIM_QUAKE_BLDG _CLASS	Earthquake Building Class Dimension	
965	STG_QUAKE_RETR OFIT_MASTER	Stage Earthquake Retrofit Master	DIM_QUAKE_RETR OFIT	Earthquake Retrofit Dimension	
966	STG_QUAKE_CON T_GRADE_MASTE R	Stage Earthquake Contents Grade Master	DIM_QUAKE_CON T_GRADE	Earthquake Contents Grade Dimension	
967	STG_ELTRC_INSUL ATE_TYPE_MASTE R	Stage Electrical Insulation Master	DIM_ELTRC_INSUL ATE_TYPE	Electrical Insulation Dimension	
968	STG_WINDSTORM _MITIGTN_MASTE R	Stage Windstorm Mitigation Master	DIM_WINDSTORM _MITIGTN	Windstorm Mitigation Dimension	
969	STG_BLD_INSPECT ION_TYPE_MASTE R	Stage Building Inspection Type Master	DIM_BLD_INSPECT ION_TYPE	Building Inspection Type Dimension	
970	STG_FL_WAITING_ PERIOD_MASTER	Stage Flood Waiting Period Master	DIM_FL_WAITING_ PERIOD	Flood Waiting Period Dimension	
971	STG_POL_COV_SU B_ASSET_MASTER	Stage Policy Coverage Sub Asset Master  PERIOD  DIM_POL_COV_SU B_ASSET		Policy Coverage Sub Asset Dimension	

#### 20.3.4.2 About Dwelling Inspection T2Ts (Result Tables)

The Dwelling Inspection T2Ts and their description are given here.

Table 168: Dwelling Inspection T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POL_COV_ASSET_INSP_DTLS	This T2T stores inspection details for the policy coverage asset.
T2T_FCT_POL_COV_SUB_ASST_INSP_DTLS	This T2T stores information about the inspection of the sub- assets. Examples of sub-assets are specialty rooms, attics, and so on.

The mapping details for Dwelling Insurance T2Ts are given here.

Table 169: The mapping details for Dwelling Insurance T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POL_COV_A SSET_INSP_DTLS	Stage Policy Coverage Asset Inspection Details	FCT_POL_COV_ASSE T_INSP_DTLS	Fact Policy Coverage Asset Inspection Details	T2T_FCT_POL_COV_ASS ET_INSP_DTLS
STG_POL_COV_S UB_ASST_INSP_D TLS	Stage Policy Coverage Sub Asset Inspection Details	FCT_POL_COV_SUB_ ASST_INSP_DTLS	Fact Policy Coverage Sub Asset Inspection Details	T2T_FCT_POL_COV_SU B_ASST_INSP_DTLS

### 20.3.5 Vehicle and Cargo Entities

The vehicle and cargo entities are categorized as follows:

- Vehicle Tables
- Transportation Tables
- Policy Covered Asset Storage Tables

The Stage Vehicle Master and Stage Vehicle Details tables are significant in the data flow process of the vehicle and cargo entities.

- Stage Vehicle Master: This table stores the vehicle details included in the policies and claims. This
  table supplies the vehicle-related information required for the cargo shipment and storage such as
  vehicle ID, Policy start date and end date of the vehicle, safety equipment types, distance traveled,
  parking details, dimension and physical details, vehicle type, engine details, transmission type,
  material type, security, and so on.
- Stage Vehicle Details: This table stores the vehicle details. This table supplies the vehicle-related
  information required for the cargo shipment and storage such as vehicle ID, inspection
  confirmation, different types of flags for the vehicle operation, usage, usage indicator, tracking
  number, job category aboard, the carrier assigned system identification code, Vehicle Purpose
  Code, and Vehicle Operated Location Code.

Vehicles with specific type of designs or interiors are required to transport particular types of cargo such as petrol, windmill blade, and so on. The vehicle table details are more useful in such cases.

#### **Topics:**

- Vehicle Data and Policy Covered Asset Usage Mapping Grid
- Vehicle Tables
- <u>Transportation Tables</u>
- Policy Covered Asset Storage Tables

### 20.3.5.1 Vehicle Data and Policy Covered Asset Usage Mapping Grid

This section provides information about the mapping grid for the vehicle data and policy-covered asset usage.

Table 170: Mapping grid for the vehicle data and policy-covered asset usage

	Lines of Business						Business Areas			loT Telematics	
Data Category	Marine	Cargo	Dwelling Insurance	Worker's Compensation	Liquor Liability Insurance	Commercial Property Insurance	Automobile Insurance	Claim	Underwriting (Driving Violations)	Underwriting (Lifestyle Activity)	
Vehicle Data in Motion							Υ	Y			Υ
Vehicle Data at Rest	Y	Υ	γ*	Υ			Y	Y		Υ	
Vehicle Driving History							Y		Υ		
Transportation	Υ	Υ		Υ			Υ				
Policy Covered Assets		Y	Y		Υ	Υ					

<sup>\*</sup>Mobile Home Insurance

### 20.3.5.2 Vehicle Tables

This section provides information about the vehicle-related tables that are generic in the Oracle Insurance Data Foundation Application Pack. These tables store the basic vehicle details. For more information about Auto Insurance, see the <a href="Property and Casualty Contract Tables">Property and Casualty Contract Tables</a> section. For information about the Vehicle IoT tables, see the <a href="Stream Data Tables for the Auto Telematics">Stream Data Tables for the Auto Telematics</a> section.

### 20.3.5.2.1 About Vehicle Dimension Tables

Vehicle Dimension table names and their description are mentioned in the following table.

Table 171: Vehicle Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Vehicle Class Sub Type Dimension	This table stores the vehicle class subtype details. The sample values are SUV, Hatchbacks, Supercars, and Superbikes.
Vehicle Class Type Dimension	This table stores the vehicle class type details. The sample values are Cars, Motorbikes, Lorry, and Aircraft.
Vehicle Filter Status Dimension	This table stores the vehicle filter status code information.  The sample values are FARE, FARS, FFRWH, FPRE, FPRS, and FRN.
Vehicle Horizontal Coordinate Reference Dimension	This table stores the code list that identifies the horizontal coordinate reference system. The sample values are NAD27, NAD83, and WGS84.
Performance Threshold Type Dimension	This table stores the performance threshold type details. The sample values are SD, RWA, LSSP, and HSTO.

The mapping details for the Vehicle Dimension tables are mentioned in the following table.

Table 172: The mapping details for the Vehicle Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
835	STG_VEH_CLASS_S	Stage Vehicle Class Sub	DIM_VEH_CLASS_ST	Vehicle Class Sub
	TYPE_MASTER	Type Master	YPE	Type Dimension
836	STG_VEH_CLASS_T	Stage Vehicle Class	DIM_VEH_CLASS_TY	Vehicle Class Type
	YPE_MASTER	Type Master	PE	Dimension
838	STG_VEH_FILTER_S	Stage Vehicle Filter	DIM_VEH_FILTER_ST	Vehicle Filter Status
	TATUS_MASTER	Status Master	ATUS	Dimension
839	STG_VEH_HC_REF_ MASTER	Stage Vehicle Horizontal Coordinate Reference Master	DIM_VEH_HC_REF	Vehicle Horizontal Coordinate Reference Dimension

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
841	STG_PERF_THRESH OLD_TYPE_MASTE R	Stage Performance Threshold Type Master	DIM_PERF_THRESH OLD_TYPE	Performance Threshold Type Dimension

#### 20.3.5.2.2 About Vehicle T2T (Result Table)

Vehicle T2T and its description are mentioned in the following table.

Table 173: Vehicle T2T and its description

T2T Name	T2T Description
T2T_FCT_VEHICLE_DETAILS	This T2T stores the vehicle details.

The mapping details for Vehicle T2T are mentioned in the following table.

Table 174: The mapping details for Vehicle T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_VEHICLE_DE	Stage Vehicle	FCT_VEHICLE_DET	Fact Vehicle	T2T_FCT_VEHICLE_DETAI
TAILS	Details	AILS	Details	LS

#### 20.3.5.3 Transportation Tables

This section provides information about the Cargo and Inland Marine, and Transportation tables. If a vehicle is a device used to transport goods or a cargo, then the transportation is the action of transporting.

The V\_VEHICLE\_ID column from the Vehicle tables is also a part of the Stage Policy Coverage Asset Shipment Detail table. This column supplies the unique identifier for the vehicle associated with the policy.

The N\_VEHICLE\_SKEY column from the Vehicle tables is also a part of the Fact Policy Coverage Asset Shipment Detail table. This column stores the Surrogate Key for the unique identifier for the vehicle associated with the policy.

The cargo is also a policy-covered asset. Therefore, the STG\_POL\_COV\_ASSET\_DTLS and FCT\_POL\_COV\_ASSET\_DTLS tables are enhanced to store the merchandise-related information. For information about the Policy Covered Asset Details tables, see the section <a href="#">About Policy Assets T2Ts</a> (Result Tables).

#### 20.3.5.3.1 About Cargo and Inland Marine, and Transportation Dimension Tables

Cargo and Inland Marine, and Transportation Dimension table names and their description are mentioned in the following table.

Table 175: Cargo and Inland Marine, and Transportation Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Shipment Mode Dimension	This table stores the shipment details of the cargo such as the shipment mode indicator and the shipment mode. The shipment mode can be by air, common carrier, rail, and so on.  The sample values are A, CommCar, Oth, Own, and R.
Transportation Dimension	This table stores information about the transportation instances in the Cargo Insurance and commercial Inland Marine Insurance.

The mapping details for the Cargo and Inland Marine, and Transportation Dimension tables are mentioned in the following table.

Table 176: The mapping details for the Cargo and Inland Marine, and Transportation Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
988	STG_SHIPMENT_M	Stage Shipment Mode	DIM_SHIPMENT_MO	Shipment Mode
	ODE_MASTER	Master	DE	Dimension
989	STG_TRANSPORTA TION_MASTER	Stage Transportation Master	DIM_TRANSPORTATI ON	Transportation Dimension

#### 20.3.5.3.2 About Cargo and Inland Marine, and Transportation T2Ts (Result Tables)

Cargo and Inland Marine, and Transportation T2T and its description are mentioned in the following table.

Table 177: Cargo and Inland Marine, and Transportation T2T and its description

T2T Name	T2T Description
T2T_FCT_POL_COV_ASSET_SHIPMENT_DTL	This T2T stores the shipment details of the policy coverage assets.

The mapping details for Cargo and Inland Marine, and Transportation T2T are mentioned in the following table.

Table 178: The mapping details for Cargo and Inland Marine, and Transportation T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POL_COV_A SSET_SHIPMENT _DTL	Stage Policy Coverage Asset Shipment Detail	FCT_POL_COV_ASS ET_SHIPMENT_DTL	Fact Policy Coverage Asset Shipment Detail	T2T_FCT_POL_COV_ASSE T_SHIPMENT_DTL

#### 20.3.5.4 Policy Covered Asset Storage Tables

This section provides information about the Policy Covered Asset Storage tables. During the transit of cargo, it is stored temporarily at different storage sites (warehouses). The Policy Covered Asset Storage tables are used to save the cargo storage details and also to map those storage details to the policy-covered asset (in this scenario, it is cargo). Therefore, there are two types of Policy Covered Asset Storage tables. They are as follows:

- Policy Covered Asset Storage Details: This table is used to save the cargo storage details such as the Storage ID, address, location ownership, operational security, perimeter fence, inventory value, backup generator, and so on.
- Policy Covered Asset Storage Map: This table is used to save the cargo storage mapping details such as the Storage ID, Policy ID, Coverage ID, and Policy Covered Asset ID, and to map the stored cargo to the policy covered assets tables. As a result, when cargo in transit is stored at different storage sites, the storage site information is mapped to the cargo information (policy covered asset) using this Policy Covered Asset Storage Map table.

For a scenario where multiple parties are involved in the shipment of a policy-covered cargo, the STG\_POLICY\_COVERAGES and FCT\_POLICY\_COVERAGES tables are enhanced to store the shipping interest percentage information. For information about the Policy Coverage tables, see the section <a href="Coverage Tables">Coverage Tables</a>.

#### 20.3.5.4.1 About Policy Covered Asset Storage Dimension Table

Policy Covered Asset Storage Dimension table name and its description are mentioned in the following table.

Table 179: Policy Covered Asset Storage Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Insurance Storage Dimension	This table stores the mapping information about the Insurance covered asset storage.

The mapping details for the Policy Covered Asset Storage Dimension table are mentioned in the following table.

Table 180: The mapping details for the Policy Covered Asset Storage Dimension table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
990	STG_INS_STORAGE _MASTER	Stage Insurance Storage Master	DIM_INS_STORAGE	Insurance Storage Dimension

#### 20.3.5.4.2 About Policy Covered Asset Storage T2Ts (Result Tables)

Policy Covered Asset Storage T2Ts and their description are mentioned in the following table.

Table 181: Policy Covered Asset Storage T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POL_COV_ASSET_STORAGE_DTLS	This T2T stores the policy coverage asset storage details for Cargo and Marine Insurance.
T2T_FCT_POL_COV_ASSET_STORAGE_MAP	This T2T stores the mapping details of the policy coverage asset storage.

The mapping details for Policy Covered Asset Storage T2Ts are mentioned in the following table.

Table 182: The mapping details for Policy Covered Asset Storage T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POL_COV_A SSET_STORAGE_ DTLS	Stage Policy Coverage Asset Storage Details	FCT_POL_COV_ASS ET_STORAGE_DTLS	Fact Policy Coverage Asset Storage Details	T2T_FCT_POL_COV_ASSE T_STORAGE_DTLS
STG_POL_COV_A SSET_STORAGE_ MAP	Stage Policy Coverage Asset Storage Map	FCT_POL_COV_ASS ET_STORAGE_MAP	Fact Policy Coverage Asset Storage Map	T2T_FCT_POL_COV_ASSE T_STORAGE_MAP

# **20.4** Deploying Policy Assets Table on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 20.5 Populating Policy Assets Dimension Tables

Follow this SCD process to populate data into a Dimension table:

NOTE

You can also follow this SCD process to populate data into any Hive-related Dimension table.

**1.** To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.

- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and **Check Error Messages**.

#### **Populating Policy Assets T2T Result Table** 20.6

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### 21 Stream Data Tables for the Auto Telematics

This section provides information about the vehicle IoT tables and their results derived from other result tables. Vehicle IoT tables consist of the Telematics tables, to which the data is sourced from the Telematics device attached to the vehicles, other vehicle monitoring systems, and vehicle service records.

#### **Topics:**

- Telematics Tables
- Deploying Stream Data Tables on Hive
- Populating Stream Data Dimension Tables
- Populating Stream Data T2T Result Tables
- Related Topics

### 21.1 Telematics Tables

Telematics is a generic term used to refer to an interdisciplinary field in Information Technology that combines telecommunications and informatics. An electronic device designed using Telematics is installed in the vehicles and it can telecommunicate computerized information. OIDF supports sourcing of the Telematics data along with other data from the devices such as Tachograph and driver behavior monitoring systems in the Auto Insurance.

Vehicle IoT (Internet of Things) Result data flow is used to design the OIDF tables that capture processed outputs of the trip level details, vehicle performance, and vehicle driver behavior details.

#### **Topics:**

- Vehicle IoT Data Flow
- About Telematics Dimension Tables
- About Telematics T2Ts (Result Tables)
- Vehicle IoT (Internet of Things) Result Data Flow
- Populating the FCT\_TRIP\_DETAILS Table
- Populating the FCT\_TRIP\_SUMMARY Table
- Population of the FCT\_VEH\_PERFORMANCE\_SUMMARY Table
- Results derived in the FCT\_DRIVER\_BEHAVIOUR\_SUMMARY Tables

#### 21.1.1 Vehicle IoT Data Flow

This illustration represents the vehicle IoT data flow in OIDF.

Data must be standardized Device Direct use of IoT data **Data from Telematics** Dața IoT Platform and other monitoring devices Vehicle Service Proposed revised premium **Underwriting and** rates **OFS Enterprise** DIH Claims Data Actuarial decision **Modeling Platform** makers Available to **External Data** OIDF the third-party Standardized vendors format of data Policy Admin Underwriting Application System

Figure 95: Vehicle IoT data flow diagram

The vehicle IoT data flow consists of the following main stages:

- 1. Data Sourcing and Processing
- 2. Modeling Platform
- 3. Underwriting and Actuarial decision-makers

The explanation to the vehicle IoT data flow is as follows:

- **1. Data Sourcing and Processing:** This stage consists of these two methods through which the vehicle and driver behavior data can be sourced into the OIDF Staging area:
  - With IoT platform: The data sourced from multiple devices is expected to be standardized on the IoT platform. The standardized data can be loaded into the OIDF Staging area using the DIH ETL connectors.
  - Without the IoT platform: The following data of different categories can be sourced directly into the OIDF Staging area:
    - Device Data
    - External data: This data is available to third-party vendors.
    - Claims data
    - Vehicle service data

Insurers can use the OIDF Staging to create entities that simulate the telematics and other monitoring device data or use DIH to standardize the data definition or structures and then load them to the OIDF Staging area. If the IoT platform does not facilitate the data standardization, then the Insurers can use DIH to standardize the data definition or structures.

- 2. Modeling Platform: OFS Enterprise Modeling platform supported by the OFSAAI can be used for modeling operations. Oracle Financial Services Enterprise Modeling leverages popular statistical platforms such as the R platform and presents a framework for developing, deploying, and managing models at the enterprise level for financial institutions. Models in the repository may then be woven into analytical application flows crafted by mixing data management tasks, model execution, and deterministic business logic. As the use of models proliferate and as modeling becomes a self-service idea within financial institutions, authorized modelers may publish techniques, parameterized templates of models that serve as building blocks or standardized blueprints for models -so that the best ideas from experienced modelers are captured and reused within the firm. For more information, see the Oracle Financial Services Enterprise Modeling User Guide Release 8.1.0.0.0.
- Underwriting and Actuarial decision-makers: Based on the resultant data during the modeling operations, the Insurance Underwriters and Actuaries can analyze statistics and calculate the insurance risks, and then revise the premium rates.

The output data from the vehicle IoT data flow can be used in the User-based Insurance (UBI), ensure that the vehicle is serviced on time, and doing the cost-benefit analysis for vehicle runs.

#### 21.1.2 About Telematics Dimension Tables

Telematics Dimension table names and their description are given here.

Table 183: Telematics Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Ignition Status Dimension	This table stores the ignition status code information. Sample values are IAS, IACS, ICCS, IOS, IRCS.
On Board Diagnostic Parameter Dimension	This table stores the onboard diagnostic codes used to request data from a vehicle and used as a diagnostic tool.
Road Terrain Sub Type Dimension	This table stores the road terrain sub type details.
Road Terrain Type Dimension	This table stores the road terrain type details. Sample values are Level, Rolling, and Mountainous.
Tachograph Card Status Dimension	This table stores the tachograph card status details. Sample values are Pending, Act, Inact, and Closed.
Tachograph Driver Card Dimension	This table stores the tachograph driver card identifier details.  Tachograph card is a device fitted to a vehicle that automatically records vehicle speed and distance traveled, and the driver activity selected from a choice of modes.
Telematics Device Dimension	This table stores the telematics device details.
Telematics Event Dimension	This table stores the telematics event details.

Logical Dimension Table Name	Dimension Table Description
Trip Dimension	This table stores the trip identifier details generated at the trip level for a given time, road type, duration, distance traveled, and time spent primarily.
Vehicle On Board Diagnostic Dimension	This table stores the vehicle onboard diagnostic code information. The table contains the actual diagnostic code reported by the device.  Sample values are ALV, ATP, AESVP, APP, AAT, AIS, BP, CELV, and so on.
Vehicle Service Status Dimension	This table stores the vehicle service status code information.  Sample values are DP, MO, OP, and POUT.
Tachograph Event Type Dimension	This table stores the tachograph event type details.
Telematics Device Status Dimension	This table stores the telematics device status code information. This code reports the status of a telematics device. Sample values are Connect, Disconnect, and Heartbeat.
Data Stream Type Dimension	This table stores the data stream type details.  Sample Value are EncodedText, PlainText, and TypeCDATA.
Driving Style Class Dimension	This table stores the list of codes that provide the driving style assessment of a particular driver.  Sample values are Risk, Aggressive, Moderate, Careful Driving, and so on.
Driving Style Parameters Dimension	This table stores the list of parameters used to decide the driving style classification.  Sample values are Speed, Acceleration, Collisions, Braking, and so on.
Device Software Type Dimension	This table stores the software type information installed on the device.  Sample values are Application, Firmware, Middleware, OperatingSystem, and Telecommunication.
Service Reason Dimension	This table stores the service reason code information.  Sample values are BD, RS, MS, and RP.
Vehicle Device Event Type Dimension	This table stores the device event type details. Sample values are C, OBR, RS, SSTART, and SSTOP.
Telematics Software Dimension	This table stores the telematics software details such as software name, issuer, and so on.
Telematics Device Type Dimension	This table stores the telematics device type details. The telematics device type code identifies the type of telematics device.  Sample values are BPD, DPN, ND, OEM, OpenOEM, OtherOnboard, Smartphone, and SmartphoneApp.

The mapping details for the Telematics Dimension tables are given here.

Table 184: The mapping details for the Telematics Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
826	STG_IGNITION_STA TUS_MASTER	Stage Ignition Status Master	DIM_IGNITION_STAT US	Ignition Status Dimension
827	STG_OBD_PARAME TER_MASTER	Stage On Board Diagnostic Parameter Master	DIM_OBD_PARAMET ER	On Board Diagnostic Parameter Dimension
828	STG_ROAD_TERRIA N_STYPE_MASTER	Stage Road Terrain Sub Type Master	DIM_ROAD_TERRIAN _STYPE	Road Terrain Sub Type Dimension
829	STG_ROAD_TERRIA N_TYPE_MASTER	Stage Road Terrain Type Master	DIM_ROAD_TERRIAN _TYPE	Road Terrain Type Dimension
830	STG_TACHOGRPH_ CARD_STTS_MAST ER	Stage Tachograph Card Status Master	DIM_TACHOGRPH_C ARD_STTS	Tachograph Card Status Dimension
831	STG_TACHOGRPH_ DRVR_CARD_MAST ER	Stage Tachograph Driver Card Master	DIM_TACHOGRPH_D RVR_CARD	Tachograph Driver Card Dimension
832	STG_TELEMATIC_D EVICE_MASTER	Stage Telematics Device Master	DIM_TELEMATIC_DE VICE	Telematics Device Dimension
833	STG_TELEMATIC_E VENT_MASTER	Stage Telematics Event Master	DIM_TELEMATIC_EV ENT	Telematics Event Dimension
834	STG_TRIP_MASTER	Stage Trip Master	DIM_TRIP	Trip Dimension
837	STG_VEH_OBD_MA STER	Stage Vehicle On Board Diagnostic Master	DIM_VEH_OBD	Vehicle On Board Diagnostic Dimension
840	STG_VEH_SERVICE _STATUS_MASTER	Stage Vehicle Service Status Master	DIM_VEH_SERVICE_ STATUS	Vehicle Service Status Dimension
842	STG_TACHOGRPH_ EVNT_TYPE_MAST ER	Stage Tachograph Event Type Master	DIM_TACHOGRPH_E VNT_TYPE	Tachograph Event Type Dimension
843	STG_TLMTC_DEVIC E_STATUS_MASTE R	Stage Telematics Device Status Master	DIM_TLMTC_DEVICE _STATUS	Telematics Device Status Dimension
844	STG_DATA_STREA M_TYPE_MASTER	Stage Data Stream Type Master	DIM_DATA_STREAM _TYPE	Data Stream Type Dimension
845	STG_DRIVING_STYL E_CLASS_MASTER	Stage Driving Style Class Master	DIM_DRIVING_STYLE _CLASS	Driving Style Class Dimension
846	STG_DRIVING_STYL E_PARAM_MASTER	Stage Driving Style Parameters Master	DIM_DRIVING_STYLE _PARAM	Driving Style Parameters Dimension
847	STG_DVC_SOFTWA RE_TYPE_MASTER	Stage Device Software Type Master	DIM_DVC_SOFTWAR E_TYPE	Device Software Type Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table	Logical Dimension Table Name
848	STG_SERVICE_REAS ON_MASTER	Stage Service Reason Master	DIM_SERVICE_REAS ON	Service Reason Dimension
849	STG_VEH_DVC_EVE NT_TYPE_MASTER	Stage Vehicle Device Event Type Master	DIM_VEH_DVC_EVE NT_TYPE	Vehicle Device Event Type Dimension
850	STG_TELEMATIC_S WARE_MASTER	Stage Telematics Software Master	DIM_TELEMATIC_S WARE	Telematics Software Dimension
851	STG_TELEMATIC_D VC_TYPE_MASTER	Stage Telematics Device Type Master	DIM_TELEMATIC_DV C_TYPE	Telematics Device Type Dimension

# 21.1.3 About Telematics T2Ts (Result Tables)

Telematics T2Ts and their description are given here.

Table 185: Telematics T2Ts and their description

T2T Name	T2T Description
T2T_FCT_TELEMATICS_DEVICE_DETAILS	This T2T stores the event log details. There are numerous events posted by a set of telematics devices. The location, accelerometer, or On-board Diagnostics Data (OBD) can also be shared as an event. Therefore, this T2T can be used when data input is not structured, and the information classification happens in OIDF.
T2T_FCT_VEHICLE_DEVICE_EVENT_DTLS	This T2T stores the vehicle device event details generated at the trip level for a given time, road type, duration, distance traveled, and time spent primarily. The Fleet Management System (FMS) is an international standardized interface for commercial vehicles. With the FMS standard, it is possible to retrieve manufacturer-independent data to compare vehicles and drivers, independent of the brand or type.
T2T_FCT_VEHICLE_FLEET_MAP	This T2T stores the fleet vehicle map details. Fleet Management is a function, which allows companies that rely on transportation in business to remove or minimize the risks associated with vehicle investment, improving efficiency, productivity, and reducing their overall transportation and staff costs, providing 100% compliance with government legislation (duty of care) and more.
	The purpose of the Fact Vehicle Fleet Map table is to store the owner and ownership details of a fleet of vehicles.
T2T_FCT_VEHICLE_SERVICES_DTLS	This T2T stores the vehicle servicing details, which is required during the claims process to determine the vehicle condition.
T2T_FCT_VEHICLE_TACHOGRPH_DATA	This T2T stores data from the tachograph, which is a device fitted to a vehicle that automatically records its speed and distance, and the driver activity selected from a choice of modes.

T2T Name	T2T Description
T2T_FCT_VEH_ACCELEROMETER_DATA	This T2T stores the vehicle accelerometer data. This data is stored as acceleration across the X, Y, and Z-axis. This T2T also stores shake threshold, free-fall detection, and so on.
T2T_FCT_VEH_LOCATION_DATA	This T2T stores the vehicle location data in a specified time frame or on a trip or in an event in line with the GPS (Global Positioning System) data.
T2T_FCT_TRIP_DETAILS	This T2T stores processed outputs generated for n times at trip level, road type, duration, distance traveled, and time spent primarily.
T2T_FCT_TRIP_FLEET_SUMMARY	This T2T stores processed outputs generated for a given time at trip level, road type, duration, distance traveled, and time spent primarily.
T2T_FCT_TRIP_SUMMARY	This T2T stores processed outputs generated for a given time at the trip level for a fleet, road type, duration, distance traveled, and time spent primarily.
T2T_FCT_DRIVER_BEHAVIOUR_SUMMARY	This T2T stores processed outputs generated for a given time at the driver level. The time spent is primarily on driving skills of the driver, for a given trip, event or throughout the specified time frame.
T2T_FCT_VEH_PERFORMANCE_SUMMARY	This T2T stores processed outputs generated at vehicle level from the vehicle purchase date. The output is based on its performance from the start date.

The mapping details for the Telematics T2Ts are given here.

Table 186: The mapping details for the Telematics T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_TELEMATIC S_DEVICE_DETAI LS	Stage Telematics Device Details	FCT_TELEMATICS_ DEVICE_DETAILS	Fact Telematics Device Details	T2T_FCT_TELEMATICS_D EVICE_DETAILS
STG_VEHICLE_DE VICE_EVENT_DTL S	Stage Vehicle Device Event Details	FCT_VEHICLE_DEVI CE_EVENT_DTLS	Fact Vehicle Device Event Details	T2T_FCT_VEHICLE_DEVIC E_EVENT_DTLS
STG_VEHICLE_FL EET_MAP	Stage Vehicle Fleet Map	FCT_VEHICLE_FLEE T_MAP	Fact Vehicle Fleet Map	T2T_FCT_VEHICLE_FLEET _MAP
STG_VEHICLE_SE RVICES_DTLS	Stage Vehicle Services Details	FCT_VEHICLE_SER VICES_DTLS	Fact Vehicle Services Details	T2T_FCT_VEHICLE_SERVI CES_DTLS
STG_VEHICLE_TA CHOGRPH_DATA	Stage Vehicle Tachograph Data	FCT_VEHICLE_TAC HOGRPH_DATA	Fact Vehicle Tachograph Data	T2T_FCT_VEHICLE_TACH OGRPH_DATA
STG_VEH_ACCEL EROMETER_DAT A	Stage Vehicle Accelerometer Data	FCT_VEH_ACCELER OMETER_DATA	Fact Vehicle Accelerometer Data	T2T_FCT_VEH_ACCELERO METER_DATA

TELEMATICS TABLES

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_VEH_LOCAT ION_DATA	Stage Vehicle Location Data	FCT_VEH_LOCATIO N_DATA	Fact Vehicle Location Data	T2T_FCT_VEH_LOCATION _DATA
STG_VEHICLE_DE VICE_EVENT_DTL S	Stage Vehicle Device Event Details	FCT_TRIP_DETAILS	Fact Trip Details	T2T_FCT_TRIP_DETAILS
STG_VEHICLE_DE VICE_EVENT_DTL S	Stage Vehicle Device Event Details	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_FLEET_SU MMARY
STG_VEHICLE_FL EET_MAP	Stage Vehicle Fleet Map	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_FLEET_SU MMARY
STG_VEHICLE_SE RVICES_DTLS	Stage Vehicle Services Details	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_FLEET_SU MMARY
STG_VEHICLE_DE VICE_EVENT_DTL S	Stage Vehicle Device Event Details	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_SUMMARY
STG_VEH_LOCAT ION_DATA	Stage Vehicle Location Data	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_SUMMARY
STG_VEHICLE_SE RVICES_DTLS	Stage Vehicle Services Details	FCT_TRIP_SUMMA RY	Fact Trip Summary	T2T_FCT_TRIP_SUMMARY
FCT_TRIP_SUMM ARY	Fact Trip Summary	FCT_DRIVER_BEHA VIOUR_SUMMARY	Fact Driver Behavior Summary	T2T_FCT_DRIVER_BEHAVI OUR_SUMMARY
FCT_TRIP_SUMM ARY	Fact Trip Summary	FCT_VEH_PERFOR MANCE_SUMMARY	Fact Vehicle Performance Summary	T2T_FCT_VEH_PERFORM ANCE_SUMMARY
FCT_VEHICLE_SE RVICES_DTLS	Fact Vehicle Services Details	FCT_VEH_PERFOR MANCE_SUMMARY	Fact Vehicle Performance Summary	T2T_FCT_VEH_PERFORM ANCE_SUMMARY

# 21.1.4 Vehicle IoT (Internet of Things) Result Data Flow

The data from the telematics and On-Board Diagnostics systems are sourced into a set of tables. The calculations are carried out in those tables and the processed outputs are stored in the FCT\_TRIP\_DETAILS, FCT\_TRIP\_SUMMARY, FCT\_DRIVER\_BEHAVIOUR\_SUMMARY, and FCT\_VEH\_PERFORMANCE\_SUMMARY tables for both the individual and fleet of vehicle scenarios. The same is depicted in the following illustration.

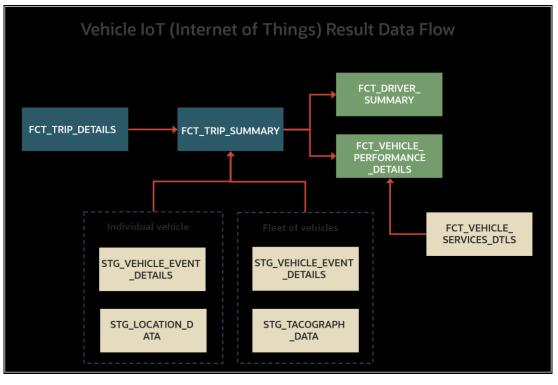


Figure 96: Vehicle IoT Result Data Flow

The same flow is depicted in the following tabular column.

Table 187: Vehicle IoT result derived tables

The sequence in the Run chart	Table Names	Use Case Description	Applicable to both individual and fleet of vehicles?	Remarks
1	FCT_TRIP_DETA ILS	These are processed outputs generated for n times at trip level, road type, duration, distance traveled, and time spent primarily	Yes	
2	FCT_TRIP_SUM MARY	These are processed outputs generated for a given time at the trip level for a fleet, road type, duration, distance traveled, and time spent primarily.	Yes	For individual vehicle, data is sourced from:  • STG_VEHICLE_DEVICE_EVE NT_DTLS  • STG_VEH_LOCATION_DAT A  For fleet of vehicles, data is sourced from:  • STG_VEHICLE_DEVICE_EVE NT_DTLS  • STG_TACOGRAPH_DATA

The sequence in the Run chart	Table Names	Use Case Description	Applicable to both individual and fleet of vehicles?	Remarks
3	FCT_DRIVER_BE HAVIOUR_SUM MARY	These are processed outputs generated for a given time at the driver level. The time spent is primarily on driving skills of the driver, for a given trip, event or throughout the specified time frame.	Yes	The results are derived and sourced from the FCT_TRIP_SUMMARY table.
4	FCT_VEH_PERF ORMANCE_SUM MARY	These are processed outputs generated at the vehicle level from the vehicle purchase date. The output is based on its performance from the start date.	Yes	The results are derived and sourced from the FCT_TRIP_SUMMARY and FCT_VEHICLE_SERVICES_DTLS tables.

In a UI defined table called FCT\_DRIVER\_BEHAVIOUR\_GUIDELINE, you can define parameters and set a custom range for each parameter as the driver behavior guidelines.

# 21.1.5 Populating the FCT\_TRIP\_DETAILS Table

This section provides information about the calculation results derived in the FCT\_TRIP\_DETAILS table using the telematics device for the time taken and distance traveled by an individual vehicle.

From the base table STG\_VEHICLE\_DEVICE\_EVENT\_DTLS, the following list of essential columns is used to calculate the time taken and the distance traveled by the vehicle for a trip.

Table 188: The list of essential columns used to populate the FCT\_TRIP\_DETAILS table

Column Name	Purpose of this column	Sample of value stored in the column
V_TRIP_ID	Stores the trip ID automatically generated by the telematics device.	Trip001
V_VEHICLE_ID	Stores the ID of the vehicle used for this particular trip	Vehicle1
V_DRIVER_ID	Stores the ID of the driver who is driving this vehicle for the current trip	Driver001
V_VEH_IGNITION_STATUS_CD	<ul> <li>Stores the vehicle ignition status in the form of codes.</li> <li>When the vehicle is started, the ignition status code stored in this column is IRCS.</li> <li>When the vehicle stops, the ignition status code stored in this column is OFF.</li> <li>The vehicle ignition status can be either IRCS or OFF for a given timestamp.</li> </ul>	<ul> <li>IRCS when the ignition on.</li> <li>OFF when the engine or ignition is off.</li> </ul>
V_TELEMATIC_EVENT_ID	Stores the event ID generated by the telematics device for each event. This column value is dependent on the value of the V_VEH_IGNITION_STATUS_CD column as follows:  • When the vehicle is started, the ignition status code stored in the column V_VEH_IGNITION_STATUS_CD is IRCS. This is considered as an event on a trip. Therefore, the event ID in the column V_TELEMATIC_EVENT_ID increases by one.  • When the vehicle stops, the ignition status code stored in this column V_VEH_IGNITION_STATUS_CD is OFF. This is considered as an event on a trip. Therefore, the event ID in the column V_TELEMATIC_EVENT_ID increases by one.  When the ignition is ON, it is one event. When the engine is OFF, it is another event.	<ul> <li>Event ID is Event001 when the ignition status is IRCS.</li> <li>Event ID is Event002 when the ignition status is OFF.</li> </ul>
V_TELEMATIC_DEVICE_ID	Stores the ID of the telematics device attached to the vehicle.	TelematicDevice1
D_DATA_FEED_TIME_STAMP	Stores the real date and time for each second. When an event occurs, the recorded timestamp from this column is used for calculations.	
V_DISTANCE_PER_UNIT_OF_FU EL	Stores the distance traveled by the vehicle per standard unit of fuel.	
FIC_MIS_DATE	Stores the date and time on which the Run is processed.	6/30/20 12:00 AM

For the calculations, consider the following scenario:

- 1. The telematics device TelematicDevice1 is attached to Vehicle1. The driver ID of the Vehicle1 is Driver001.
- **2.** The driver starts the vehicle.

- a. Therefore, the TelematicDevice1 records the vehicle ignition status as IRCS and the value IRCS is stored in the V VEH IGNITION STATUS CD column.
- **b.** Also, as the vehicle ignition status is changed from OFF to ON, the TelematicDevice1 records this as an event and the value Event001 is stored in the V\_TELEMATIC\_EVENT\_ID column.
- **c.** The timestamp is stored in the D\_DATA\_FEED\_TIME\_STAMP column.
- **3.** After driving for a certain amount of time, the driver stops the Vehicle1.
  - a. Therefore, the TelematicDevice1 records the vehicle ignition status as OFF and the value OFF is stored in the V\_VEH\_IGNITION\_STATUS\_CD column.
  - **b.** Also, as the vehicle ignition status is changed from on to off, the TelematicDevice1 records this as an event and the value Event002 is stored in the V\_TELEMATIC\_EVENT\_ID column.
  - **c.** The timestamp continues to store in the D\_DATA\_FEED\_TIME\_STAMP column.

This scenario is considered as one trip represented here by the trip ID Trip001. Events and triggers are expected to be different for different device vendors.

### Topic:

Results Derived using the Calculations

### **Results Derived using the Calculations** 21.1.5.1

This section provides information about how the time taken and the distance traveled by the vehicle during a trip are calculated.

## **Topics:**

- Calculation of the Time Taken for a Trip
- Calculation of the Distance Travelled by the Vehicle during a Trip

#### Calculation of the Time Taken for a Trip 21.1.5.1.1

The calculation of the time taken for a trip is explained as follows.

Table 189: Explanation of the different stages of time taken calculation

Sequence Number	Calculation Stage Description	Remarks
1	The difference in the timestamp values between Event001 and Event002 results in the time taken between two events.	This time difference is obtained using the D_DATA_FEED_TIME_STAMP column.
2	The preceding calculation is repeated for the consecutive timestamp values for a trip.	For the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.
3	The summation of the preceding calculation results in the time taken for a trip.	The result is stored in the column FCT_TRIP_DETAILS.N_DRIVING_TIME.

Therefore, at any given time this gives time taken for a trip so far. In a similar method, the time taken for different trips for different vehicles and drivers can be calculated.

### Calculation of the Distance Travelled by the Vehicle during a Trip 21.1.5.1.2

This section provides information about how the distance traveled by the vehicle during a trip is calculated.

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In addition to the <u>Calculation of the Time Taken for a Trip</u> in the previous section, for illustration, consider the following:

- The mileage of the Vehicle1 is 15 kmpl (kilometer per liter of fuel).
- The total fuel (diesel in this illustration) consumed for Trip001 is 2 liter (for the distance traveled from the start point to the endpoint).
- The time taken for the Trip001 is stored in the FCT\_TRIP\_DETAILS.N\_DRIVING\_TIME column in seconds.

Therefore, the total distance traveled for Trip001 on 2 liters of fuel is 30 kilometer. This value is stored in the column FCT\_TRIP\_DETAILS.N\_DRIVING\_DISTANCE.

The different calculation stages of the distance traveled for a trip is explained as follows.

Table 190: Explanation of the different stages of the calculation of distance traveled by the vehicle

Sequence Number	Calculation Stage Description	Remarks
1	The time taken for a trip.	Stored in the column FCT_TRIP_DETAILS.N_DRIVING_TIME for the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.
2	Using the time taken from the previous step and standard mileage of the vehicle, the distance traveled for a trip is calculated as illustrated in the beginning of this section.	The result is stored in the column FCT_TRIP_DETAILS.N_DRIVING_DISTANCE.

# 21.1.6 Populating the FCT\_TRIP\_SUMMARY Table

This section provides information about the results derived into the FCT\_TRIP\_SUMMARY table using the telematics and On-board Diagnostics (OBD) system data for a fleet of vehicles and for individual vehicles.

From the base table STG\_VEHICLE\_DEVICE\_EVENT\_DTLS, the following list of essential columns is used for derivations.

Table 191: Main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table used for calculations

Column Name	Purpose of this column	Sample of value(s) stored in the column
V_TRIP_ID	Stores the trip ID automatically generated by the telematics device.	Trip001
V_VEHICLE_ID	<ul> <li>Stores the ID of the vehicle used for this particular trip.</li> <li>For an individual vehicle, the Vehicle ID is sourced from the STG_VEH_LOCATION_DATA table.</li> <li>For a fleet of vehicles, the Vehicle ID is sourced from the STG_VEHICLE_TACHOGRPH_DATA table.</li> </ul>	Vehicle1
V_DRIVER_ID	Stores the ID of the driver who is driving this vehicle for the current trip.	Driver001
V_TRIP_START_LOCATION_CODE	Stores the location information, from where the vehicle current trip begins, in the form of a code.	
V_TRIP_END_LOCATION_CODE	Stores the location information, where the vehicle current trip ends, in the form of a code.	
N_TOP_GEAR_VALUE	Stores the top gear value of a vehicle.	

Column Name	Purpose of this column	Sample of value(s) stored in the column
D_DATA_FEED_TIME_STAMP	Stores the real date and time for each second or for a decided unit of time. When an event occurs, the recorded timestamp from this column is used for calculations.	
D_TRIP_START_DATE	Stores the trip start date for a vehicle and the trip.	
D_TRIP_END_DATE	Stores the trip end date for a vehicle and the trip.	
N_ENGINE_LOAD_PERCENT	Stores the percentage of the rated load of a vehicle engine for the trip.	
N_TOT_TIME_CONSUMD_IN_IDLE	Stores the total amount of time during which the vehicle was in the idle condition during a trip. The unit stored is in seconds.	

For the calculations, consider the following scenario:

- 1. Consider that the Vehicle1 driver is Driver001. When the driver starts the vehicle, the trip start date is stored in the D\_TRIP\_START\_DATE column and the timestamp is stored in the D\_DATA\_FEED\_TIME\_STAMP column.
- **2.** After the trip is completed by the driver, the trip end date is stored in the D\_TRIP\_END\_DATE column and the timestamp is stored in the D\_DATA\_FEED\_TIME\_STAMP column.

This scenario is considered as one trip represented here by the trip ID Trip001.

**NOTE** 

The following sections are applicable to both the individual vehicle and a fleet of vehicle scenarios.

The result derivations into the FCT\_TRIP\_SUMMARY table is divided into the following categories:

- Results Derived using Calculations
- Results Derived using Aggregation
- Key Data Elements

## 21.1.6.1 Results Derived using Calculations

The following sections contain information about how the results are derived using the calculations.

- Distance Covered in the Top Gear by the Vehicle during a Trip
- Average Miles Traveled Per Day and Per Trip
- Average Speed per Hour of the Vehicle on a Trip
- Total and Average Count of Trips

### 21.1.6.1.1 Calculation of the Distance Covered in the Top Gear by the Vehicle during a Trip

This section provides information about how the distance covered by the vehicle in top gear during a trip is calculated.

For calculation, the following columns are used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 192: Additional columns used for calculation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Source Column Name	Purpose of this column
N_TOP_GEAR_VALUE	Stores the top gear value of a vehicle.
N_NO_OF_MIN_IN_TOP_GEAR	Stores the number of minutes the vehicle is in top gear for a trip. The On-board Diagnostics (OBD) system is expected to provide the number of minutes the vehicle is in top gear when driving. This data transformation accumulates the minutes to get the total number of minutes the vehicle is in top gear.
N_FUEL_CONSMD_IN_TOP_GEAR	Stores the amount of fuel consumed in top gear for a trip. The On-board Diagnostics (OBD) system is expected to provide the amount of fuel consumed in liters by the vehicle in top gear when driving. This data transformation accumulates the quantity of liters to get the total amount of fuel consumed in liters by the vehicle in top gear.

The calculation is explained as follows.

Table 193: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Type or purpose of the source or result column
1	The On-board Diagnostics (OBD) system is expected to provide the number of minutes the vehicle is in top gear when driving.	The result is stored in the N_NO_OF_MIN_IN_TOP_GEAR column.
2	The On-board Diagnostics (OBD) system is expected to provide the amount of fuel consumed in liters by the vehicle in top gear when driving.	The result is stored in the N_FUEL_CONSMD_IN_TOP_GEAR column.
3	Similar to the <u>Calculation of the Distance Travelled by the Vehicle during a Trip</u> section, using the amount of time and the amount of fuel consumed in the top gear by the vehicle, the calculation results in the distance covered in the top gear by the vehicle during a trip.	The result is stored in the column FCT_TRIP_SUMMARY.N_DISTANCE_COVERED_IN_TOP_G EAR.

## 21.1.6.1.2 Calculation of Average Miles Traveled Per Day and Per Trip

This section provides information about how the average distance traveled in miles by a vehicle is calculated for the following scenarios:

- Per day
- Per trip

For calculation, the columns from the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table</u> are used.

The calculation of average distance traveled per **day** is explained as follows.

Table 194: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Remarks
1	The distance traveled during a trip for a vehicle is calculated as depicted in the <u>Calculation of the Distance Travelled by the Vehicle during a Trip</u> section.	The resultant distance traveled for the trip is stored in the column FCT_TRIP_DETAILS.N_DRIVING_DISTANCE.
2	The time taken for a trip is calculated as depicted in the <u>Calculation of the Time Taken for a Trip</u> section.	The resultant time taken for the trip is stored in the column FCT_TRIP_DETAILS.N_DRIVING_TIME.

Sequence Number	Calculation Stage Description	Remarks
3	The total distance for the trip is converted into miles.	The result is the number of miles of distance covered during the trip.
4	The total time taken for the trip is converted into days.	The result is the total number of days taken for the trip.
5	The total distance covered in miles for the trip is divided by the number of days of the trip.	The result is the average distance covered in miles by the vehicle per day and is stored in the column FCT_TRIP_SUMMARY.N_AVG_MILES_TRVLD_PER_DAY

The calculation of average distance traveled per **trip** is explained as follows.

Table 195: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Remarks
1	The distance traveled during a trip for a vehicle is calculated as depicted in the <u>Calculation of the Distance Travelled by the Vehicle during a Trip</u> section.	The resultant distance traveled for the trip is stored in the column FCT_TRIP_DETAILS.N_DRIVING_DISTANCE.
2	The preceding calculation is repeated for all the trips taken by the vehicle.	The result is the total distance traveled by the vehicle for all trips combined.
3	The resultant distance is converted into the unit of miles.	
4	The total distance in miles is divided by the count of trips.	The result is the average distance covered in miles by the vehicle per trip and is stored in the column FCT_TRIP_SUMMARY.N_AVG_MILES_TRVLD_PER_TRIP.

## 21.1.6.1.3 Calculation of Average Speed per Hour of the Vehicle on a Trip

This section provides information about how the average speed per hour of the vehicle during a trip is calculated.

For calculation, the following columns are used along with the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table</u>:

Table 196: Additional column used for calculation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
N_ENGINE_SPEED_PH	Stores the vehicle engine speed (speed per hour) calculated for each second of the trip or for a standard time unit.

The calculation is explained as follows.

Table 197: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Remarks
1	All the values of the vehicle engine speed (speed per hour) are summed up. This is the total value of the vehicle engine speed (per hour) on a trip.	The N_ENGINE_SPEED_PH column value for the range between D_TRIP_START_DATE and D_TRIP_END_DATE.
2	The time taken for a trip is calculated as depicted in the <u>Calculation</u> of the Time Taken for a <u>Trip</u> section.	The resultant time taken for the trip is stored in the column FCT_TRIP_DETAILS.N_DRIVING_TIME.
3	The total time taken for the trip is converted into hours.	The result is the total number of hours taken for the trip.
4	The total value of the vehicle engine speed (per hour) is divided by the total number of hours taken for the trip.	The result is the average speed of the vehicle on the trip and stored in the column FCT_TRIP_SUMMARY.N_AVG_SPEED_OF_VEH_ON_TRIP.

## 21.1.6.1.4 Calculation of Total and Average Count of Trips

This section provides information about how the following counts are found:

- Total count of trips
- Average count of trips per month

For calculation, the following columns are used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 198: Additional columns used for calculation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column	Sample of value(s) stored in the column
V_TRIP_ID	Stores the trip ID automatically generated by the telematics device.	Trip001
FIC_MIS_DATE	Stores the date and time on which the Run is processed.	

The calculation of the **total** count of trips is explained as follows.

Table 199: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Remarks
1	When the Run is processed, the highest value of the generated trip ID can be found.	Run is processed for the FIC_MIS_DATE.
2	The preceding calculation results in the <i>total</i> trip count.	The result is stored in the column FCT_TRIP_SUMMARY.N_COUNT_OF_TRIPS.

The calculation of the **average** count of trips per month is explained as follows.

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Table 200: Explanation of the different stages of calculation

Sequence Number	Calculation Stage Description	Remarks	
1	The trip IDs of 30 days period is calculated.	Run is processed for the FIC_MIS_DATE with any start date and end date difference of 30 days.	
2	The count of 30 days of trip IDs is divided by a period of one month (in days).		
3	The preceding calculation results in the <i>average</i> count of trips per month.	The result is stored in the column	

## 21.1.6.2 Results Derived using Aggregation

The following sections contain information about how the results are derived using the aggregation:

- Driving Minutes and Rest Duration of the Vehicle
- Total Number of Minutes and Fuel Consumed in the Top Gear by the Vehicle during a Trip
- Cumulative Distance Covered
- Fuel Consumed
- Average duration of Trips per month
- Driver Behavior when Driving
- Driving Behavior and the Aggressive Driving Behavior
- Count of Garage Visits for Vehicle Service

## 21.1.6.2.1 Result Derivation of the Driving Minutes and Rest Duration of the Vehicle

This section provides information about how the following results are derived and aggregated for a vehicle:

- Continuous driving time
- Current duration of a trip in days
- Total number of hours the engine is utilized
- Cumulative driving minutes for the previous and current year
- Cumulative rest duration in minutes

For information about how the time taken by the vehicle for a trip or between two events is calculated, see the section <u>Calculation of the Time Taken for a Trip</u>.

For derivation using aggregation, the following essential columns are used along with the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS</u> table section.

Table 201: Essential columns used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column	Sample of value(s) stored in the column	
V_VEH_IGNITION_STATUS_CD	Stores the vehicle ignition status in the form of codes.	IRCS when the ignition on.	

Column Name	Purpose of this column	Sample of value(s) stored in the column
	When the vehicle is started, the ignition status code stored in this column is IRCS.	OFF when the engine or ignition is off.
	When the vehicle stops, the ignition status code stored in this column is OFF.	
	The vehicle ignition status can be either IRCS or OFF for a given timestamp.	
D_DATA_FEED_TIME_STAMP	Stores the real date and time for each second or for a decided unit of time. When an event occurs, the recorded timestamp from this column is used for calculations.	

The result derivation using aggregation is explained as follows.

Table 202: Explanation of the result derivation using aggregation

Scenario type	Source Table Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Continuous driving time	From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used V_VEH_IGNITION_STATUS_CD, D_TRIP_START_DATE, D_TRIP_END_DATE, and D_DATA_FEED_TIME_STAMP.	For a trip, the number of driving minutes is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>ON</b> and for the date range between the D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_ COUNTINOUS_DRIVING_ TIME_MIN	The continuous driving time of a trip is stored in the target column.
Current duration of a trip in days	From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used V_VEH_IGNITION_STATUS_CD, D_TRIP_END_DATE, and D_DATA_FEED_TIME_STAMP.  D_TRIP_END_DATE.  The duration of a trip in minutes is accumulated for the time lapse between two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>ON</b> and for the date range between the D_TRIP_START_DATE and D_TRIP_END_DATE, and <b>converted into days</b> .		FCT_TRIP_SUMMARY.N_ CURR_DURATION_OF_TR IP	The current duration of a trip in days is stored in the target column.
Total number of hours the engine is utilized	From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used V_VEH_IGNITION_STATUS_CD, D_TRIP_START_DATE, D_TRIP_END_DATE, and D_DATA_FEED_TIME_STAMP.	For a trip, the number of minutes the vehicle engine is utilized is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>ON</b> and for the date range between the D_TRIP_START_DATE and D_TRIP_END_DATE, and <b>converted into hours</b> .	FCT_TRIP_SUMMARY.N_ TOTAL_ENGINE_UTILIZE D_HRS	The total number of hours the engine is utilized during a trip is stored in the target column.
Cumulative driving minutes for the previous and current year	From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used V_VEH_IGNITION_STATUS_CD, D_TRIP_START_DATE, D_TRIP_END_DATE, D_DATA_FEED_TIME_STAMP, and V_TRIP_ID.	The number of driving minutes is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>ON</b> and for the date range between the previous year and the current year to the present day.	FCT_TRIP_SUMMARY.N_ CUM_DRIVING_MIN_PRV S_CUR	The cumulative driving minutes for the previous year and the current year to the present day is stored in the target column.

Scenario type	Source Table Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Cumulative rest duration in minutes	From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used V_VEH_IGNITION_STATUS_CD, D_TRIP_START_DATE, D_TRIP_END_DATE, and D_DATA_FEED_TIME_STAMP.	For a trip, the number of minutes the vehicle is not running is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>OFF</b> and for the date range between the D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_ CUM_REST_DUARATION _IN_MIN	The cumulative vehicle rest duration in minutes for a trip is stored in the target column.

## 21.1.6.2.2 Result Derivation for the Total Number of Minutes and Fuel Consumed in the Top Gear by the Vehicle during a Trip

This section provides information about how the following results are derived and aggregated:

- Total number of minutes the vehicle was in the top gear
- Total amount of fuel consumed by the vehicle in the top gear

For derivation using aggregation, the following columns are used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 203: Additional columns used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
N_TOP_GEAR_VALUE	Stores the top gear value of a vehicle.
N_NO_OF_MIN_IN_TOP_GEAR	Stores the number of minutes the vehicle is in top gear for a trip. The On-board Diagnostics (OBD) system is expected to provide the number of minutes the vehicle is in top gear when driving. This data transformation accumulates the minutes to get the total number of minutes the vehicle is in top gear.
N_FUEL_CONSMD_IN_TOP_GEAR	Stores the amount of fuel consumed in top gear for a trip. The On-board Diagnostics (OBD) system is expected to provide the amount of fuel consumed in liters by the vehicle in top gear when driving. This data transformation accumulates the quantity of liters to get the total amount of fuel consumed in liters by the vehicle in top gear.

The result derivations using aggregation are explained as follows.

Table 204: Explanation of the result derivation using aggregation

Result derivation type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Total number of minutes the vehicle was in the top gear	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_NO_O F_MIN_IN_TOP_GEAR	The number of minutes the vehicle is in top gear during a trip, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ NO_OF_MIN_IN_TOP_GEAR	The result is the total number of minutes the vehicle is in top gear during the trip and is stored in the target column.

Result derivation type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Total amount of fuel consumed in liters by the vehicle in the top gear	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_FUEL_ CONSMD_IN_TOP_GEA R	The amount of fuel consumed in liters in the top gear during a trip, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ FUEL_CONSMD_TOP_GEAR	The result is the total amount fuel consumed by the vehicle in top gear during the trip and is stored in the target column.

## 21.1.6.2.3 Result Derivation for the Cumulative Distance Covered

This section provides information about how the cumulative distance covered to date is calculated.

For derivation using aggregation, the following columns are used along with the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table</u>:

Table 205: Additional column used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
V_DISTANCE_PER_UNIT_OF_FUEL	Stores the distance covered per a standard unit of fuel.

The result derivation using aggregation is explained as follows.

Table 206: Explanation of the result derivation using aggregation

Result derivation type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Cumulative fuel quantity consumed on a trip	STG_VEHICLE_DEVICE_ EVENT_DTLS.V_DISTA NCE_PER_UNIT_OF_FU EL	The amount of distance covered during a trip, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_CUM_ DISTANCE_COVRED_TRIP	The result is the cumulative distance covered for the trip and is stored in the target column.

## 21.1.6.2.4 Result Derivation of the Fuel Consumed

This section provides information about how the cumulative fuel consumed for the following scenarios are derived:

- For a trip
- For 24 hours of a trip

For derivation using aggregation, the following columns are used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 207: Additional column used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column	
N_FUEL_CONSUMED_IN_LTRS	Stores the quantity of fuel consumed by the vehicle in liters. The On-board Diagnostics (OBD) system is expected to provide the amount of fuel consumed in liters when driving. This data transformation accumulates the measurement of liters to get the total amount of fuel consumed in liters.	

The result derivations using aggregation are explained as follows.

Table 208: Explanation of the result derivations using aggregation

Result derivation type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Cumulative fuel quantity consumed on a trip	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_FUEL_ CONSUMED_IN_LTRS	The amount of fuel consumed in liters when driving, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_CUM_ FUEL_USED_ON_TRIP	The result is the cumulative fuel used for a trip and is stored in the target column.
Cumulative fuel quantity consumed on a trip in 24 hours	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_FUEL_ CONSUMED_IN_LTRS	The amount of fuel consumed in liters when driving, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range of 24 hours between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_CUM_ FUEL_USED_IN_24HRS	The result is the cumulative fuel used in 24 hours for a trip and is stored in the target column.

### 21.1.6.2.5 Result Derivation of the Average duration of Trips per month

This section provides information about how the average trip duration per month is aggregated.

Consider the following details for this aggregation:

The difference between the columns D\_TRIP\_END\_DATE and D\_TRIP\_START\_DATE results in the number of days per trip (for Trip001 in this calculation).

For illustration, consider that the Driver001 takes 5 such trips in a month tabulated as follows.

Table 209: Sample for finding the average duration of trips per month

V_DRIVER_ID	V_TRIP_ID	Number of days during a trip (the difference between the columns D_TRIP_END_DATE and D_TRIP_START_DATE)
Driver001	Trip001	1
Driver001	Trip002	3
Driver001	Trip003	4
Driver001	Trip004	4
Driver001	Trip005	3
	Total number of trips = 5	Total number of days for total number of trips = 15

From the illustration, average number of days per trip is 3 days (Days traveled divided by the number of trips taken).

In general, the average duration of trips per month is found as follows:

Table 210: Explanation of the result derivation using aggregation

Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
From the STG_VEHICLE_DEVICE_EVENT_DTLS table, these columns are used D_TRIP_END_DATE, D_TRIP_START_DATE, D_DATA_FEED_TIME_STAMP, and V_TRIP_ID.	The average duration per trip per month is found.	FCT_TRIP_SUMMARY.N_AVERAG E_DURATION_OF_TRIP_PM	The result is derived and stored in this column.

### **Results Derivation of the Driver Behavior when Driving** 21.1.6.2.6

This section provides driver behavior information when driving the vehicle. This section provides information about how the total amount of time for the following driver behaviors is derived:

- **Smoking**
- Cell phone usage
- Texting on the phone

For derivation using aggregation, the following columns are used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 211: Additional columns used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
N_NO_OF_MIN_SMOKING_WHL_DRIVE	Stores the number of minutes spent smoking by the driver when driving during a trip. The On-board Diagnostics (OBD) system is expected to provide minutes of smoking when driving. This data transformation accumulates the minutes to get the total number of minutes for this behavior.

Column Name	Purpose of this column
N_NO_OF_MIN_CELL_USG_WHL_DRIVE	Stores the number of minutes spent by the driver using the cell phone when driving during a trip. The On-board Diagnostics (OBD) system is expected to provide minutes of cell phone usage when driving. This data transformation accumulates the minutes to get the total number of minutes for this behavior.
N_NO_OF_MIN_TEXTING_WHL_DRIVE	Stores the number of minutes spent by the driver texting on the cell phone when driving during a trip. The On-board Diagnostics (OBD) system is expected to provide minutes of texting when driving. This data transformation accumulates the minutes to get the total number of minutes for this behavior.

The result derivations using aggregation are explained as follows.

Table 212: Explanation of the result derivations using aggregation

Driver behavior type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column	Remarks (for Target Table and Column)
Smoking	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_NO_OF _MIN_SMOKING_WHL_D RIVE	The number of minutes the driver was smoking when driving, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ NO_OF_MIN_SMKNG_WHL_DR VN	The summation of the sourced calculation results in the total number of minutes spent smoking by the driver when driving during a trip. The result is stored in the target column.
Cell phone usage	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_NO_OF _MIN_CELL_USG_WHL_ DRIVE	The number of minutes the driver was using the cell phone when driving, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ MIN_CELL_USG_WHL_DRVNG	The summation of the sourced calculation results in the total number of minutes spent by the driver using the cell phone when driving during a trip. The result is stored in the target column.
Texting on the phone	STG_VEHICLE_DEVICE_ EVENT_DTLS.N_NO_OF _MIN_CELL_USG_WHL_ DRIVE	The number of minutes the driver was texting on the phone when driving, which is sourced by the On-board Diagnostics (OBD) system is accumulated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_NO_O F_MIN_TEXTING_WHL_DRIVE	The summation of the sourced calculation results in the total number of minutes spent texting on the phone by the driver when driving during a trip. The result is stored in the target column.

### Result Derivation of the Driving Behavior and the Aggressive Driving Behavior 21.1.6.2.7

This section provides information about how the following driving behavior is derived:

Total number of brakes applied

This section also provides information about how the following aggressive driving behaviors is derived:

TELEMATICS TABLES

- Total count of harsh brakes
- <u>Last Year-to-Date count of harsh brakes</u>
- Total count of accidents
- Last Year-to-Date count of accidents
- Total count of harsh accelerations
- <u>Last Year-to-Date count of harsh accelerations</u>

For derivation using aggregation, the following column is used along with the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS</u> <u>table</u>:

Table 213: Additional columns used for derivation using aggregation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column	Sample of value(s) stored in the column
F_BRAKE_SWITCH_ACTIVE_FLAG	Every time the brakes are applied causing the brake switch to turn ON during a trip, this flag saves the value as Y. On-board Diagnostics (OBD) system is expected to update the value of this flag. This data transformation calculates the number of times when this flag is streamed as active and accumulates the count for a given trip.	Y
V_DEVICE_EVENT_TYPE	Stores the type of event that happened during the trip for an individual vehicle.	Accident, Cornering, SUDDENACLRTN, SUDDENBRKNG, OFF, OBR, Shutdown.
STG_VEHICLE_MASTER.D_PURC HASE_DATE	Stores the purchase date of the vehicle.	
N_HARSH_BRAKING_COUNT	Stores count of the brakes applied harshly during a trip. In the event of brakes applied, if the percentage deceleration (N_ACCELARATION_PERCENT) reaches or crosses 5, then it qualifies as harsh braking and the On-board Diagnostics (OBD) system is expected to provide the count of brakes applied harshly when driving.	Count of SUDDENBRKNG
N_HARSH_ACCELARATION_COU NT	Stores count of the harsh accelerations during a trip. In the event of harsh acceleration, if the percentage acceleration (N_ACCELARATION_PERCENT) reaches or crosses 5, then it qualifies as harsh acceleration and the On-board Diagnostics (OBD) system is expected to provide the count of harsh acceleration when driving.	Count of SUDDENACLRTN

The result derivations using aggregation are explained as follows.

Table 214: Explanation of the result derivations using aggregation

Event type and period	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Total number of brakes applied during a trip	STG_VEHICLE_DEVICE_E VENT_DTLS.F_BRAKE_S WITCH_ACTIVE_FLAG	The total number of times the F_BRAKE_SWITCH_ACTIVE_FLAG column is set to Y during a trip is sourced by the On-board Diagnostics (OBD) system for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ NO_OF_BRAKE_IN_EVENT	The result is the total number of times the brakes were applied by the driver during a trip and stored in the target column.
Harsh brakes (Total count)	STG_VEHICLE_DEVICE_E VENT_DTLS.N_HARSH_B RAKING_COUNT	The total number of times the harsh brakes applied during a trip is sourced by the Onboard Diagnostics (OBD) system for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ COUNT_OF_HARSH_BRAKING	The result of the total count of harsh braking during a trip is stored in the target column.
Harsh brakes (The count for the last Year- to-Date period)	STG_VEHICLE_DEVICE_E VENT_DTLS.N_HARSH_B RAKING_COUNT	The total number of times the harsh brakes applied during a trip is sourced by the Onboard Diagnostics (OBD) system for the date range from the beginning date of the previous financial year to the present day.	FCT_TRIP_SUMMARY.N_LST_Y R_TO_DATE_HARSH_BRAKING	The result of the total number of harsh braking applied for the last Year-to-Date period is stored in the target column.
Accidents (Total count)	STG_VEHICLE_DEVICE_E VENT_DTLS.V_DEVICE_E VENT_TYPE and STG_VEHICLE_MASTER.D _PURCHASE_DATE	In the event of an accident, the value Accident is stored in the V_DEVICE_EVENT_TYPE column. The total number of accident events occurred during a trip is sourced by the V_DEVICE_EVENT_TYPE column for the date range from the vehicle purchase date (STG_VEHICLE_MASTER.D_PURCHASE_DATE) to the present day.	FCT_TRIP_SUMMARY.N_TOTA L_COUNT_OF_ACCIDENTS	The result of the total number of accidents is stored in the target column.
Accidents (The count for the last Year-to-Date period)	STG_VEHICLE_DEVICE_E VENT_DTLS.V_DEVICE_E VENT_TYPE	In the event of an accident, the value <i>Accident</i> is stored in the V_DEVICE_EVENT_TYPE column. The total number of accident events occurred is sourced by the V_DEVICE_EVENT_TYPE column for the date range from the beginning date of the previous financial year to the present day.	FCT_TRIP_SUMMARY.N_LST_Y R_TO_DATE_COUNT_OF_ACC	The result of the total number of accidents occurred for the last Year-to-Date period is stored in the target column.

Event type and period	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Harsh accelerations (Total count)	STG_VEHICLE_DEVICE_E VENT_DTLS.N_HARSH_A CCELARATION_COUNT	The total number of times the harsh accelerations occurred during a trip is sourced by the On-board Diagnostics (OBD) system for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP and the date range between the columns D_TRIP_START_DATE and D_TRIP_END_DATE.	FCT_TRIP_SUMMARY.N_TOT_ COUNT_OF_HARSH_ACCELRT NS	The result of the total count of harsh accelerations during a trip is stored in the target column.
Harsh accelerations (The count for the last Year- to-Date period)	STG_VEHICLE_DEVICE_E VENT_DTLS.N_HARSH_A CCELARATION_COUNT	The total number of times the harsh accelerations occurred during a trip is sourced by the On-board Diagnostics (OBD) system for the date range from the beginning date of the previous financial year to the present day.	FCT_TRIP_SUMMARY.N_LST_Y R_TO_DATE_HARSH_ACCLRT N	The result of the total number of harsh accelerations for the last Year-to-Date period is stored in the target column.

## 21.1.6.2.8 Result Derivation of the Count of Garage Visits for Vehicle Service

This section provides information about how the following count of garage visits for the vehicle service is aggregated and derived:

- Total garage visits
- Annual garage visits

For derivation using aggregation, the following columns are used:

Table 215: Columns used for derivation using aggregation from the STG\_VEHICLE\_SERVICES\_DTLS table

Column Name	Purpose of this column	Sample of value(s) stored in the column
STG_VEHICLE_SERVICES_DTLS.V_V EHICLE_ID	<ul> <li>Stores the ID of the vehicle used for the particular trip.</li> <li>For an individual vehicle, the Vehicle ID is sourced from the STG_VEH_LOCATION_DATA table.</li> <li>For a fleet of vehicles, the Vehicle ID is sourced from the STG_VEHICLE_TACHOGRPH_DATA table.</li> </ul>	Vehicle1
STG_VEHICLE_SERVICES_DTLS.FIC_ MIS_DATE	Stores the date and time on which the Run is processed for the vehicle service details.	
STG_VEHICLE_SERVICES_DTLS.D_SE RV_START_DATE	Stores the vehicle service start date.	
STG_VEHICLE_SERVICES_DTLS.D_SE RV_END_DATE	Stores the vehicle service end date.	
D_DATA_FEED_TIME_STAMP	Stores the vehicle service real date and time for each second or for a decided unit of time. This gives the time spent by the vehicle in a garage for a selected vehicle service date range.	

The result derivation using aggregation is explained as follows.

Result derivation type	Source Table Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Total garage visits by a vehicle	The above-mentioned columns from the STG_VEHICLE_SERVICES_DTLS table are used along with the column STG_VEHICLE_MASTER.D_PUR CHASE_DATE.	The number of vehicle garage visits is accumulated for the period of the vehicle purchase date (STG_VEHICLE_MASTER.D_PURCHASE_D ATE) to the present day.	FCT_TRIP_SUMMARY.N_ TOTAL_GARAGE_VISITS	The total count of garage visits by a vehicle is stored in the target column.
Annual garage visits by a vehicle	The above-mentioned columns from the STG_VEHICLE_SERVICES_DTLS table are used.	The number of vehicle garage visits is accumulated for the period of the current financial year.	FCT_TRIP_SUMMARY.N_ ANNUAL_GARAGE_VISIT S	The count of annual garage visits by a vehicle is stored in the target column.

## 21.1.6.3 Key Data Elements

The following sections contain information about how the key data elements are located and the results are derived for a vehicle:

- Location Co-ordinates at the Start and End of the Trip
- Odometer Readings at the Start and the End of the Trip
- Previous Odometer Reading and the Fuel Used Reset Date
- <u>Last Known Location Information</u>
- Maximum and Minimum Engine RPM during a Trip

### 21.1.6.3.1 How the Vehicle Location Co-ordinates are found at the Start and End of the Trip

This section provides information about how the following vehicle location coordinate values at the trip start and end are found (for the accurate GPS location calculation):

- Longitude
- Latitude
- Altitude

Consider the following 2 use cases for find the longitude, latitude, and altitude.

In this calculation, first step is to arrive at the start of trip, which is done as below:

## For an individual vehicle, consider the following:

From the *Telematics* device, consider the following events, parameters, and values:

- 1. The *Telematics* deviceTelematicDevice1 is attached to Vehicle1.
- 2. The driver with the ID Driver001 starts the vehicle.
- **3.** The trip start date is stored in the D\_TRIP\_START\_DATE column.
- **4.** The trip is completed by the driver.
- **5.** The trip end date is stored in the D\_TRIP\_END\_DATE column.

**6.** This is considered as one trip represented here by the trip ID Trip001.

## For a fleet of vehicles, consider the following:

From the *Tachograph* device, consider the following events, parameters, and values:

- **1.** The *Tachograph* device VehTacho1 is attached to Vehicle1.
- 2. The driver with the ID Driver101 and the tachograph driver ID DrvrCRD1 is appointed.
- **3.** The trip is started by the driver.
- **4.** The trip start date and time are stored in the D\_EVENT\_START\_DATETIME column.
- **5.** As the vehicle ignition status is changed from off to on, the VehTacho1 records this as an event, and the V\_TACHOGRAPH\_EVENT\_TYPE column stores the value EvntTacho001.
- **6.** The trip is completed by the driver.
- **7.** The trip end date and time are stored in the D\_EVENT\_END\_DATETIME column.
- **8.** As the vehicle ignition status is changed from on to off, the VehTacho1 records this as an event, and the V\_TACHOGRAPH\_EVENT\_TYPE column stores the value EvntTacho002.
- 9. This is considered as one trip represented here by the trip ID Trip001.

The following columns are used for vehicle location derivation along with the <u>main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS</u> <u>table</u>:

Table 217: Additional columns used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table along with the STG\_VEH\_LOCATION\_DATA and STG\_VEHICLE\_TACHOGRPH\_DATA table columns

Vehicle Coordinate Type	Source Table Name	Source Column Name	Purpose of this column	Applicable to an individual vehicle or a fleet of vehicles?
Longitude	STG_VEH_LOCATION_DATA	V_VEHICLE_LONGITUDE _VALUE	Stores the longitude value of the vehicle location.	Individual vehicle
Latitude	STG_VEH_LOCATION_DATA	V_VEHICLE_LATITUDE_V ALUE	Stores the latitude value of the vehicle location.	Individual vehicle
Altitude	STG_VEH_LOCATION_DATA	V_VEHICLE_ALTITUDE_V ALUE	Stores the altitude value of the vehicle location.	Individual vehicle
Longitude	STG_VEHICLE_TACHOGRPH _DATA	V_VEHICLE_LONGITUDE _VALUE	Stores the longitude value of the vehicle location.	Fleet of vehicles
Latitude	STG_VEHICLE_TACHOGRPH _DATA	V_VEHICLE_LATITUDE_V ALUE	Stores the latitude value of the vehicle location.	Fleet of vehicles
Altitude	STG_VEHICLE_TACHOGRPH _DATA	V_VEHICLE_ALTITUDE_V ALUE	Stores the altitude value of the vehicle location.	Fleet of vehicles
	STG_VEHICLE_DEVICE_EVEN T_DTLS	D_DATA_FEED_TIME_ST AMP	Minimum value timestamp is used to identify trip <b>start</b> time.  Maximum value timestamp is used to identify trip <b>end</b> time.	Individual vehicle

Vehicle Coordinate Type	Source Table Name	Source Column Name	Purpose of this column	Applicable to an individual vehicle or a fleet of vehicles?
	STG_VEHICLE_TACHOGRPH _DATA	D_EVENT_START_DATET IME	Stores the trip <b>start</b> date and time.	Fleet of vehicles
	STG_VEHICLE_TACHOGRPH _DATA	D_EVENT_END_DATETIM E	Stores the trip <b>end</b> date and time.	Fleet of vehicles

Finding the trip start and end longitude, latitude, and altitude coordinates of the vehicle location is explained as follows.

Table 218: Explanation of finding the vehicle location coordinates

Business Element	Trip start or end event	Target Table Name	Target Column Name	Remarks (for an individual vehicle)	Remarks (for a fleet of vehicles)
Longitude of the vehicle location	Start	FCT_TRIP_SUMMARY	V_TRIP_START_LON GITUDE	The trip start longitude value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_LONGITUDE_VALUE and stored in the target column.	The <i>trip start longitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_LONGITUDE_VALUE and stored in the target column for the trip start time.
Longitude of the vehicle location	End	FCT_TRIP_SUMMARY	V_TRIP_END_LONGI TUDE	The trip <i>end longitude</i> value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_LONGITUDE_VALUE and stored in the target column.	The <i>trip end longitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_LONGITUDE_VALUE and stored in the target column for the trip end time.
<b>Latitude</b> of the vehicle location	Start	FCT_TRIP_SUMMARY	V_TRIP_START_LATI TUDE	The trip start latitude value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_LATITUDE_VALUE and stored in the target column.	The <i>trip start latitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_LATITUDE_VALUE and stored in the target column for the trip start time.
<b>Latitude</b> of the vehicle location	End	FCT_TRIP_SUMMARY	V_TRIP_END_LATITU DE	The trip end latitude value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_LATITUDE_VALUE and stored in the target column.	The <i>trip end latitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_LATITUDE_VALUE and stored in the target column for the trip end time.
Altitude of the vehicle location	Start	FCT_TRIP_SUMMARY	V_TRIP_START_ALTI TUDE	The trip start altitude value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_ALTITUDE_VALUE and stored in the target column.	The <i>trip start altitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_ALTITUDE_VALUE and stored in the target column for the trip start time.
<b>Altitude</b> of the vehicle location	End	FCT_TRIP_SUMMARY	V_TRIP_END_ALTITU DE	The trip end altitude value is derived from the column STG_VEH_LOCATION_DATA.V_VE HICLE_ALTITUDE_VALUE and stored in the target column.	The <i>trip end altitude</i> value is derived from the column STG_VEHICLE_TACHOGRPH_DATA.V_VEHI CLE_ALTITUDE_VALUE and stored in the target column for the trip end time.

#### How the Odometer Readings at the Start and the End of the Trip are found 21.1.6.3.2

This section provides information about finding the following key data elements:

- Odometer reading at the trip start date
- Odometer reading at the trip end date

The following columns are used for finding the odometer reading at the trip start and end date along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 219: Additional columns used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column	Sample of value(s) stored in the column
N_ODOMETER_READING	Stores the Odometer reading of the vehicle.	
F_TRIP_START_FLAG	When the trip starts and the ignition status is IRCS, this flag stores the value Y.	Υ
F_TRIP_END_FLAG	When the trip ends and the ignition status is OFF, this flag stores the value Y.	Υ

Finding the odometer reading at the trip start and end date of the vehicle are explained as follows.

Table 220: Explanation of finding the odometer reading at the trip start date and end date of the vehicle

Business Element	Target Table Name	Target Column Name	Source table, column and condition	Remarks (for Target Column)
Odometer reading at the trip start date	FCT_TRIP_SUMMARY	N_ODOMETER_READING_AT _START	When the ignition status is IRCS, the F_TRIP_START_FLAG column stores the value Y. The odometer reading of the vehicle from the N_ODOMETER_READING column is used.	The result is the odometer reading of the vehicle at the trip start date and it is stored in the target column.
Odometer reading at the trip end date	FCT_TRIP_SUMMARY	N_ODOMETER_READING_AT _END	When the ignition status is OFF, the F_TRIP_END_FLAG column stores the value Y. The odometer reading of the vehicle from the N_ODOMETER_READING column is used.	The result is the odometer reading of the vehicle at the trip end date and it is stored in the target column.

### 21.1.6.3.3 How the Previous Odometer Reading and the Fuel Used Reset Date are found

This section provides information about finding the following key data elements:

- The previous odometer reading
- The fuel used reset date:

In this scenario, the On-board Diagnostics system is expected to set the flag F\_ODOMETER\_RESET\_FLAG to Y. Based on this flag value and date feed time stamp, the data transformation updates the date. With this transformation, the end user can reflect the odometer resets in fuel consumption analysis.

The following column is used for finding the previous odometer reading and the fuel used reset date along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 221: Additional column used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
STG_VEHICLE_DEVICE_EVENT_DT LS.F_ODOMETER_RESET_FLAG	The Fuel Reset Flag is set to Y whenever the vehicle fuel becomes empty. As a result, this F_ODOMETER_RESET_FLAG flag is set to Y. On-board Diagnostics system is expected to set the flag F_ODOMETER_RESET_FLAG to Y. Based on this flag value and date feed time stamp, the data transformation updates the date.

Finding the previous odometer reading and the fuel used reset date are explained as follows.

Table 222: Explanation of finding the previous odometer reading and the fuel used reset date

Business Element	Target Table Name	Target Column Name	Source table, column and condition	Remarks (Result for an individual vehicle)	Remarks (Result for a fleet of vehicles)
Previous odometer reading	FCT_TRIP_SUMMARY	N_PREVIOUS_ODO METER_READING	When the source column STG_VEH_LOCATION_DATA.F_OD OMETER_RESET_FLAG is set to Y.	The odometer reading is stored in the target column.	The current odometer reading for the flag set date is stored in the target column.
Fuel used date is reset	FCT_TRIP_SUMMARY	N_FUEL_USED_RES ET_DATE_SKEY	When the source column STG_VEH_LOCATION_DATA.F_OD OMETER_RESET_FLAG is set to Y.	The SKey of the timestamp is stored in the target column.	The flag set date is stored in the target column.

#### How the Vehicle Last Known Location Information is found 21.1.6.3.4

This section provides information about how the last known vehicle location information, when the vehicle is at rest, is found.

The following column is used for finding the last known vehicle location information along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 223: Additional column used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
STG_VEH_LOCATION_DATA.V_STO	Stores the location code of the vehicle where it stopped.
P_LOCATION_CODE	<b>NOTE:</b> This is applicable to an individual vehicle.

The last known location code of the vehicle that is at rest or not on any trip helps an insurer to know of the active time and current location of the vehicle versus the expected normal area of servicing. This helps the insurers to arrive at usage analysis conveying if the vehicle is used for right purpose and is running for a minimum distance required.

Finding the vehicle last known location information is explained as follows.

Business Element	Target Table Name	Target Column Name	Source table, column and remarks	Remarks (for Target Column)
Vehicle last known location information	FCT_TRIP_SUMMARY	F_LAST_KNOWN_LOC ATION_FLAG	<ol> <li>For the date in the column         STG_VEHICLE_DEVICE_EVENT_DTLS.D_T         RIP_END_DATE, the value in the column         STG_VEH_LOCATION_DATA.V_STOP_LOC         ATION_CODE is verified.</li> <li>Then the same location code is verified         against the DIM_LOCATION entity.</li> </ol>	If the location code is present in the DIM_LOCATION entity, then the value in the column FCT_TRIP_SUMMARY.F_LAST_KNOWN_LOCATION_FLAG is set to Y, else it is set to N.

#### 21.1.6.3.5 How the Maximum and Minimum Engine RPM for a Vehicle during a Trip is found

This section provides information about how the following vehicle engine Rotations per Minute (RPM) is found for a trip:

- Maximum RPM
- Minimum RPM

The following column is used for finding the maximum and minimum engine RPM along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 225: Additional column used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
N_ENGINE_RPM_PER_MINUTE	Stores the value of the vehicle engine Rotations per Minute (RPM).

Finding the vehicle engine maximum and minimum RPM values are explained as follows.

Table 226: Explanation of finding the vehicle engine maximum and minimum RPM values

Business Element	Target Table Name	Target Column Name	Remarks (for Target Column)
Maximum RPM	FCT_TRIP_SUMMARY	N_MAX_ENGINE_RPM _PER_MINUTE	The maximum RPM value is stored in the target column.
Minimum RPM	FCT_TRIP_SUMMARY	N_MIN_ENGINE_RPM_ PER_MINUTE	The minimum RPM value is stored in the target column.

### Population of the FCT\_VEH\_PERFORMANCE\_SUMMARY Table **21.1.7**

This section provides information about the results derived into the FCT\_VEH\_PERFORMANCE\_SUMMARY table using the telematics and On-board Diagnostics (OBD) system data for a fleet of vehicles and for individual vehicles.

From the base table STG\_VEHICLE\_DEVICE\_EVENT\_DTLS, the following list of essential columns is used for derivations.

Table 227: Main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table used for calculations

Column Name	Purpose of this column	Sample of value(s) stored in the column
V_TRIP_ID	Stores the trip ID automatically generated by the telematics device.	Trip001
V_VEHICLE_ID	<ul> <li>Stores the ID of the vehicle used for this particular trip.</li> <li>For an individual vehicle, the Vehicle ID is sourced from the STG_VEH_LOCATION_DATA table.</li> <li>For a fleet of vehicles, the Vehicle ID is sourced from the STG_VEHICLE_TACHOGRPH_DATA table.</li> </ul>	Vehicle1
V_DRIVER_ID	Stores the ID of the driver who is driving this vehicle for the current trip.	Driver001
V_TRIP_START_LOCATION_CODE	Stores the location information, from where the vehicle current trip begins, in the form of a code.	
V_TRIP_END_LOCATION_CODE	Stores the location information, where the vehicle current trip ends, in the form of a code.	
D_DATA_FEED_TIME_STAMP	Stores the real date and time for each second. When an event occurs, the recorded timestamp from this column is used for calculations.	
D_TRIP_START_DATE	Stores the trip start date for a vehicle and the trip.	
D_TRIP_END_DATE	Stores the trip end date for a vehicle and the trip.	
N_ENGINE_LOAD_PERCENT	Stores the percentage of the rated load of a vehicle engine for the trip.	
N_TOT_TIME_CONSUMD_IN_IDLE	Stores the total amount of time during which the vehicle was in the idle condition during a trip. The unit stored is in seconds.	

**NOTE** 

The following sections are applicable to both the individual vehicle and a fleet of vehicle scenarios.

## **Topics:**

- Results Derived using Aggregation
- **Key Data Elements**

### **Results Derived using Aggregation** 21.1.7.1

The following sections contain information about how the results are derived using the aggregation:

- Direct Column Result Derivations from the FCT\_TRIP\_SUMMARY table
- **Total and Average Service Costs**
- Total Breakdown Time of the Vehicle

### 21.1.7.1.1 Direct Column Result Derivations from the FCT\_TRIP\_SUMMARY table

This section contains information about the results derived directly from the FCT\_TRIP\_SUMMARY table columns into the FCT\_VEH\_PERFORMANCE\_SUMMARY table columns.

Table 228: The column results derived from the FCT\_TRIP\_SUMMARY table into the FCT\_VEH\_PERFORMANCE\_SUMMARY table

The type of result derived into the FCT_VEH_PERFORMANCE_SUMMAR Y table	FCT_VEH_PERFORMANCE_SUM MARY table column <i>into</i> which the result is derived	FCT_TRIP_SUMMARY table column <i>from</i> which the result is derived	Reference to the FCT_TRIP_SUMMARY section that contains the derived aggregation result
Cumulative number of hours the engine is utilized for the current financial year beginning date to the present day is accumulated.	N_CUM_ENGINE_HRS	N_TOTAL_ENGINE_UTILIZED _HRS	See the Total number of hours the engine is utilized result derivation type in the Result Derivation of the Driving Minutes and Rest Duration of the Vehicle section.
Average duration of trips per month for the period of the current financial year to the present day.	N_AVERAGE_DURATION_OF_TRIP _PM	N_AVERAGE_DURATION_OF_ TRIP_PM	See the result derivation from aggregation in the Result Derivation of the Average duration of Trips per month section.
Total trip count for the period of current financial year to the present day.	N_COUNT_OF_TRIPS	N_COUNT_OF_TRIPS	See the result derivation from calculation for the <i>Total count of trips</i> in the <u>Calculation of Total and Average Count of Trips</u> section.
Average count of trips for the period of the current financial year to the present day.	N_AVERAGE_COUNT_OF_TRIP_P M	N_AVERAGE_COUNT_OF_TRI P_PM	See the result derivation from calculation for the <i>Average count of trips per month</i> in the <u>Calculation of Total and Average Count of Trips</u> section.
Total count of harsh brakes for the period of vehicle purchase date to the present day.	N_TOT_COUNT_OF_HARSH_BRA KING	N_TOT_COUNT_OF_HARSH_ BRAKING	See the result derivation from aggregation of the Total count of harsh brakes in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Last Year-to-Date count of harsh brakes for the period of previous financial year beginning date to the present day.	N_LST_YR_TO_DATE_HARSH_BR AKING	N_LST_YR_TO_DATE_HARSH _BRAKING	See the result derivation from aggregation of the Last Year-to-Date count of harsh brakes in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Total count of accidents for the period of vehicle purchase date to the present day.	N_TOTAL_COUNT_OF_ACCIDENT S	N_TOTAL_COUNT_OF_ACCID ENTS	See the result derivation from aggregation of the Total count of accidents in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Last Year-to-Date count of accidents for the period of previous financial year beginning date to the present day.	N_LST_YR_TO_DATE_COUNT_OF _ACC	N_LST_YR_TO_DATE_COUNT _OF_ACC	See the result derivation from aggregation of the Last Year-to-Date count of accidents in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Total count of accidents for the period of vehicle purchase date to the present day.	N_TOT_COUNT_OF_HARSH_ACCE LRTNS	N_TOT_COUNT_OF_HARSH_ ACCELRTNS	See the result derivation from aggregation of the Total count of harsh accelerations in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Last Year-to-Date count of accidents for the period of previous financial year beginning date to the present day.	N_LST_YR_TO_DATE_HARSH_AC CLRTN	N_LST_YR_TO_DATE_HARSH _ACCLRTN	See the result derivation from aggregation of the Last Year-to-Date count of harsh accelerations in the Result Derivation of the Driving Behavior and the Aggressive Driving Behavior section.
Total count of garage visits for the period of the vehicle purchase date to the present day.	N_TOTAL_GARAGE_VISITS	N_TOTAL_GARAGE_VISITS	See the result derivation from aggregation of the Total garage visits in the Result Derivation of the Count of Garage Visits for Vehicle Service section.

The type of result derived into the FCT_VEH_PERFORMANCE_SUMMAR Y table	FCT_VEH_PERFORMANCE_SUM MARY table column <i>into</i> which the result is derived	FCT_TRIP_SUMMARY table column <i>from</i> which the result is derived	Reference to the FCT_TRIP_SUMMARY section that contains the derived aggregation result
The count of annual garage visits for the period of the current financial year.	N_ANNUAL_GARAGE_VISITS	N_ANNUAL_GARAGE_VISITS	See the result derivation from aggregation of the Annual garage visits in the Result Derivation of the Count of Garage Visits for Vehicle Service section.

### 21.1.7.1.2 **Result Derivation of the Total and Average Service Costs**

This section provides information about how the following types of service costs of the vehicle are aggregated and derived:

- Total service cost
- Annual service cost
- Part replacement total service cost
- Part replacement annual service cost
- Total labor service cost
- Annual labor service cost

For derivation using aggregation, the following columns are used:

Table 229: Columns used for derivations from the Vehicle Service Details table and the STG\_VEHICLE\_MASTER table

Column Name	Table Name	Purpose of this column
N_TOTAL_SERVICE_REPAIR_COST	FCT_VEHICLE_SERVICES_DTLS	Stores the total service repair cost of the vehicle per service.
N_SERVICE_PART_REPLACMNT_COST	FCT_VEHICLE_SERVICES_DTLS	Stores the service part replacement cost of the vehicle per service.
N_SERVICE_LABOUR_COST	FCT_VEHICLE_SERVICES_DTLS	Stores the service labor cost of the vehicle per service.
D_SERV_START_DATE	STG_VEHICLE_SERVICES_DTLS	Stores the vehicle service start date.
D_SERV_END_DATE	STG_VEHICLE_SERVICES_DTLS	Stores the vehicle service end date.
D_PURCHASE_DATE	STG_VEHICLE_MASTER	Stores the vehicle purchase date.

The result derivations using aggregation are explained as follows.

Table 230: Explanation of the result derivations using aggregation

Service cost type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column	Remarks (for Target Table and Column)
Total service cost	FCT_VEHICLE_SERVICES_DTLS .N_TOTAL_SERVICE_REPAIR_C OST	For a vehicle that is serviced, the service cost is aggregated for the period of the vehicle purchase date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_TOTAL_SERVICE_C OST	The result is the total service cost of the vehicle and it is stored in the target column.

Service cost type	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Annual service cost	FCT_VEHICLE_SERVICES_DTLS .N_TOTAL_SERVICE_REPAIR_C OST	For a vehicle that is serviced, the service cost is aggregated for the period of the current financial year beginning date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_ANNUAL_SERVICE_ COST	The result is the annual service cost of the vehicle and it is stored in the target column.
Part replacement total service cost	FCT_VEHICLE_SERVICES_DTLS .N_SERVICE_PART_REPLACMN T_COST	For a vehicle that is serviced, the part replacement service cost is aggregated for the period of the vehicle purchase date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_TOTAL_PART_REPL ACEMENT_COST	The result is the part replacement total service cost of the vehicle and it is stored in the target column.
Part replacement annual service cost	FCT_VEHICLE_SERVICES_DTLS .N_SERVICE_PART_REPLACMN T_COST	For a vehicle that is serviced, the part replacement service cost is aggregated for the period of the current financial year beginning date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_ANNUAL_PART_RE PLACEMENT_COST	The result is the part replacement annual service cost of the vehicle and it is stored in the target column.
Total labor service cost	FCT_VEHICLE_SERVICES_DTLS .N_SERVICE_LABOUR_COST	For a vehicle that is serviced, the labor service cost is aggregated for the period of the vehicle purchase date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_TOTAL_LABOR_CO ST	The result is the total labor service cost of the vehicle and it is stored in the target column.
Annual labor service cost	FCT_VEHICLE_SERVICES_DTLS .N_SERVICE_LABOUR_COST	For a vehicle that is serviced, the labor service cost is aggregated for the period of the current financial year beginning date to the present day.	FCT_VEH_PERFORMANCE_SU MMARY.N_ANNUAL_LABOR_C OST	The result is the annual labor service cost of the vehicle and it is stored in the target column.

### Result Derivation of the Total Breakdown Time of the Vehicle 21.1.7.1.3

This section provides information about how the total breakdown time of the vehicle is aggregated and derived.

For derivation using aggregation, the following column is used:

Table 231: Column used for derivation from the Vehicle Service Details table

Column Name	Table Name	Purpose of this column
D_BREAKDOWN_TIME	FCT_VEHICLE_SERVICES_DTLS	Stores the breakdown time of the vehicle.

The result derivation using aggregation is explained as follows.

Table 232: Explanation of the result derivation using aggregation

Purpose	Source Table and Column Name	Remarks (for Source Table and Column)	Target Table and Column Name	Remarks (for Target Table and Column)
Total Breakdown Time of the Vehicle	For the data from these columns V_VEH_IGNITION_STATUS_CD with OFF code, D_TRIP_END_DATE, and D_DATA_FEED_TIME_STAMP (from the STG_VEHICLE_DEVICE_EVENT_DT LS table), the vehicle breakdown time is recorded and stored in the column FCT_VEHICLE_SERVICES_DTLS.D_B REAKDOWN_TIME.	The number of minutes the vehicle is not running is aggregated for the time lapse between the two consecutive time stamp data D_DATA_FEED_TIME_STAMP when the engine is <b>OFF</b> (corresponding to the time lapse between FCT_VEHICLE_SERVICES_DTLS.D_BREA KDOWN_TIME and the vehicle ignition IRCS time).	FCT_VEH_PERFORMANC E_SUMMARY.N_TOTAL_ BREAKDOWN_TIME_MIN	The result is the total amount of vehicle breakdown time in minutes and it is stored in the target column.

### **Key Data Elements** 21.1.7.2

The following sections contain information about how the key data elements are located, and the results are derived for a vehicle:

- Odometer Flag Reset Value
- **Initial and Previous Odometer Reading**
- Age of the Vehicle
- **Average Engine Load Percent**

### 21.1.7.2.1 How the Odometer Flag Reset Value is found

This section provides information about how the odometer flag reset value is found.

The following column is used along with the main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table:

Table 233: Additional column used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
STG_VEHICLE_SERVICES_DTLS. F_ODOMETER_RESET_FLAG	The Fuel Reset Flag is set to Y whenever the vehicle fuel becomes empty. As a result, this F_ODOMETER_RESET_FLAG flag is set to Y. In the current scenario, the F_ODOMETER_RESET_FLAG flag is set to Y during the vehicle service.

Finding the odometer flag reset value is explained as follows.

Table 234: Explanation of finding the odometer flag reset value

Business Element	Target Table Name	Target Column Name	Source table, column and condition	Remarks (for Target Column)
Odometer flag reset value	FCT_VEH_PERFORMANCE _SUMMARY	F_ODOMETER_RESET_ FLAG	When the STG_VEHICLE_SERVICES_DTLS.F_ODOMETER_RE SET_FLAG column is set to Y. The date is verified and the current odometer reading is reset.	The result of odometer flag reset value is stored in the target column.

## 21.1.7.2.2 How the Initial and Previous Odometer Reading are derived

This section contains information about how the following key data elements are derived:

- Initial odometer reading
- Previous odometer reading

The results are derived directly from the FCT\_TRIP\_SUMMARY table columns into the FCT\_VEH\_PERFORMANCE\_SUMMARY table columns.

Table 235: The column results derived from the FCT\_TRIP\_SUMMARY table into the FCT\_VEH\_PERFORMANCE\_SUMMARY table

The business element derived into the FCT_VEH_PERFORMANCE_SUMMARY table	FCT_VEH_PERFORMANCE_SUM MARY table column <i>into</i> which the result is derived	FCT_TRIP_SUMMARY table column <i>from</i> which the result is derived	Reference to the FCT_TRIP_SUMMARY section that contains the derived aggregation result
Initial odometer reading of the vehicle.	N_ODOMETER_READING	N_ODOMETER_READING_AT _START	See the vehicle Odometer reading at the trip start date section (in the How the Odometer Readings at the Start and the End of the Trip are found section), which is derived into the result column FCT_VEH_PERFORMANCE_SUMMARY.N_ODOM ETER_READING.
Previous odometer reading.	N_PREVIOUS_ODOMETER_READI NG	N_PREVIOUS_ODOMETER_RE ADING	See the vehicle previous odometer reading section (in the How the Previous Odometer Reading and the Fuel Used Reset Date are found section), which is derived into the result column FCT_VEH_PERFORMANCE_SUMMARY.N_PREVIOUS_ODOMETER_READING.

## 21.1.7.2.3 How the Age of the Vehicle is found

This section provides information about how the age of the vehicle is found.

Table 236: Column used for derivation

Column Name	Purpose of this column
STG_VEHICLE_MASTER.D_PURCHASE_DATE	Stores the purchase date of the vehicle.

Finding the age of the vehicle is explained as follows.

Table 237: Explanation of finding the age of the vehicle

Business Element	Target Table Name	Target Column Name	Remarks
Age of the vehicle	FCT_VEH_PERFORMANCE_ SUMMARY	N_VEHICLE_AGE	The difference between the D_PURCHASE_DATE of the vehicle and the current date results in the age of the vehicle and it is stored in the target column.

### **How the Average Engine Load Percent is found** 21.1.7.2.4

This section provides information about how the average engine load percent of the vehicle is found.

Table 238: Additional column used for derivation from the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table

Column Name	Purpose of this column
N_ENGINE_LOAD_PERCENT	Stores the percentage of the rated load of a vehicle engine for the trip. The On-board Diagnostics (OBD) system is expected to provide the percentage of vehicle engine load when driving. This data transformation accumulates the engine load percentage to get the total amount of vehicle engine load percentage.

Finding the average engine load percent of the vehicle is explained as follows.

Table 239: Explanation of finding the average engine load percent of the vehicle

Business Element	Target Table Name	Target Column Name	Remarks (for Source)	Remarks (for Target Column)
Average engine load percent of the vehicle	FCT_VEH_PERFORM ANCE_SUMMARY	N_ENGINE_LOAD_PER CENT	<ul> <li>For the period of the current financial year start date and the present day:</li> <li>1. The total amount of vehicle engine load percentage, which is sourced by the Onboard Diagnostics (OBD) system is accumulated.</li> <li>2. The output is divided by the number of trips.</li> </ul>	The result is the average engine load percent for each trip for the current financial year and it is stored in the target column.

### Results derived in the FCT\_DRIVER\_BEHAVIOUR\_SUMMARY Tables 21.1.8

This section provides the driver behavior information during a trip derived from the telematics and On-board Diagnostics (OBD) system data.

This section contains information about the result derivations in the FCT\_DRIVER\_BEHAVIOUR\_SUMMARY tables. The data into the FCT\_DRIVER\_BEHAVIOUR\_SUMMARY columns are derived from the FCT\_TRIP\_SUMMARY table columns.

Table 240: The data derived into the FCT\_DRIVER\_BEHAVIOUR\_SUMMARY columns from the FCT\_TRIP\_SUMMARY table columns

The column in the FCT_TRIP_SUMMARY table		The resultant column in the FCT_DRIVER_BEHAVIOUR_SUMMARY table
N_TOT_IDLE_TIME_ON_TRIP	Stores the calculated total time idle on a trip.	N_DRIVER_IDLE_TIME_ON_TRIP

The column in the FCT_TRIP_SUMMARY table	Purpose of the column	The resultant column in the FCT_DRIVER_BEHAVIOUR_SUMMARY table
N TOT NO OF BRAKE IN EVENT	Stores the total number of braking events during a trip.	N_NO_OF_BRAKES_APPLIED
N MAX ENGINE RPM PER MINUTE	Stores the maximum engine RPM value. This provides the maximum speed reached.	N_MAX_ENGINE_RPM_PER_MINUTE
N TOT NO OF MIN SMKNG WHL DRVN	Stores the total amount of time spent smoking by the driver when driving during a trip.	N_TOT_NO_OF_MIN_SMKNG_WHL_DRVN
N TOT MIN CELL USG WHL DRVNG	Stores the total amount of time spent using the cell phone by the driver when driving during a trip.	N_TOT_MIN_CELL_USG_WHL_DRVNG
N TOT MIN TEXTING WHL DRIVE	Stores the total amount of time spent by the driver texting on the phone when driving during a trip.	N_TOT_MIN_TEXTING_WHL_DRIVE
N CUM DISTANCE COVRED TRIP	Stores the cumulative distance covered to date.	N_CUM_DIST_COVRED_IN_TRIP_MTRS
N CUM FUEL USED ON TRIP	Stores the cumulative amount of the fuel used on a trip.	N_CUM_FUEL_CONSUMED_IN_LTRS
N_TOTAL_ENGINE_UTILIZED_HRS	Stores the total number of vehicle engine utilization hours. This is the total driving hours.	N_CUM_HR_ON_DRIVING
N AVG SPEED OF VEH ON TRIP	Stores the average speed of the vehicle during a trip.	N_AVG_SPEED_OF_VEH_ON_TRIP
N CURR DURATION OF TRIP	Stores information about the current duration of a trip for a vehicle.	N_AVG_HRS_SPNT_PER_TRIP

### **Key Data Elements** 21.1.8.1

This section contains information to locate the key data elements and derive results.

### 21.1.8.1.1 How the Age of the Driver is found

This section provides information about how the age of the driver is found.

Finding the age of the driver is explained as follows.

Table 241: Explanation of finding the age of the driver

Business Element	Target Table Name	Target Column Name	Remarks (for Source)	Remarks (for Target Column)
Age of the driver	FCT_DRIVER_BEHAVIOUR_ SUMMARY	N_DRIVER_AGE	The vehicle driver age is derived from the STG_PARTY_MASTER table by using the FIC_MIS_DATE.	The result is stored in the target column.

# **21.2** Deploying Stream Data Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications</u>
Infrastructure User Guide Release 8.1.1.0.0.

### **NOTE**

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>.

# 21.3 Populating Stream Data Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension</u> (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and Check Error Messages.

# 21.4 Populating Stream Data T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. <u>Prerequisites for loading T2T</u>.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- 3. To check the error messages, if any, follow the procedure in the Check Error Messages section.

## **Related Topics** 21.5

You can see the following topics related to other function-specific tables:

- **Insurance Contracts Tables**
- Insurance Claims Tables

# 22 Stream Data Tables for the Health Wearables

This section provides information about the Health Wearable related IoT (Internet of Things) tables and their results derived from the other result tables. The Health Wearable related IoT tables consist of the Telematics tables to which the data is sourced from the Health Wearable activity device wore by the Party.

## **Topics:**

- About Health Wearable Dimension Tables
- About Health Wearable T2Ts (Result Tables)
- Health IoT (Internet of Things) Result Data Flow
- Populating the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY Table
- Populating the FCT\_PHYSICAL\_ACTIVITY\_TRACKING Table
- Deploying Stream Data Tables for the Health Wearables on Hive
- Populating Stream Data Dimension Tables for the Health Wearables
- Populating Stream Data T2T Result Tables for the Health Wearables
- Related Topics

Telematics is a generic term used to refer to an interdisciplinary field in Information Technology that combines telecommunications and informatics. A wearable electronic device designed using Telematics along with Biosensors is called a Health Wearable device and it can telecommunicate computerized information. OIDF supports sourcing of the Telematics data along with other data from the devices such as wearable fitness trackers, smart health watches, wearable ECG monitors, wearable blood pressure monitors, and Biosensors.

Health IoT Result Tables data flow is used to design the OIDF tables that capture processed outputs of the Party physical activity details and health profile guidelines provided to the Party. The results are derived into the Physical Activity Summary and Physical Activity Tracking Result tables.

# **22.1** About Health Wearable Dimension Tables

Health Wearable Dimension table names and their description are given here.

Table 242: Health Wearable Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Activity Device Type Dimension	This table stores the type of activity device that the Party wears such as wearable fitness trackers, smart health watches, wearable ECG monitors, wearable blood pressure monitors, and Biosensors.
	The sample values are wft, shw, wecgm, wbpm, and bio.
Physical Activity Type Dimension	This table stores the details of the different physical activity types. Physical activity means the body movement where energy is used such as playing a sport or exercising or daily activities.
	The sample values are based on the physical activity type such as a team activity or an individual activity as follows:
	<ul> <li>If it is a team activity, then the sample values are baseball, cricket, hockey, and soccer.</li> </ul>

Logical Dimension Table Name	Dimension Table Description
	If it is an individual activity, then the sample values are walking, gardening, running, CTS, gymnastics, and if it is an exercise, then cooldown, wcwp, cycling, hc, ct, jr, or if it a studio activity then yoga, mb, sd, and cd.
Physical Activity Dimension	This table stores an identifier for each physical activity of the Party such as walking, running, climbing the stairs, playing soccer, and so on, and the corresponding physical activity description.
	The sample values are walking, gardening, running, CTS, PS, dancing, exercise, and so on.
Physical Activity Device Dimension	This table stores the physical activity device details such as the serial number, model number, and version number. A physical activity tracker device is a fitness tracker. It is an application or a device that monitors and tracks the metrics related to fitness. The metrics can be the distance walked or run, the calorie consumption, or the heart rate.
Activity Goal Dimension	This table stores the physical activity goal details. A goal is the desired result set by a Party before beginning a physical activity. A Party can use the physical activity device to set the goals and track the progress. As a result, the Party can set bigger goals eventually.
Party Profiling Dimension	This table stores the health profile of the Party.

The mapping details for the Health Wearable Dimension tables are mentioned in the following table.

Table 243: The mapping details for the Health Wearable Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
991	STG_ACT_DVC_TYP E_MASTER	Stage Activity Device Type Master	DIM_ACT_DVC_TYPE	Activity Device Type Dimension
992	STG_PHYSCL_ACT_ TYPE_MASTER	Stage Physical Activity Type Master	DIM_PHYSCL_ACT_T YPE	Physical Activity Type Dimension
993	STG_PHYSICAL_AC	Stage Physical Activity	DIM_PHYSICAL_ACTI	Physical Activity
	TIVITY_MASTER	Master	VITY	Dimension
994	STG_PHYSCL_ACT_	Stage Physical Activity	DIM_PHYSCL_ACT_D	Physical Activity
	DEVICE_MASTER	Device Master	EVICE	Device Dimension
995	STG_ACTIVITY_GO	Stage Activity Goal	DIM_ACTIVITY_GOA	Activity Goal
	AL_MASTER	Master	L	Dimension
996	STG_PARTY_PROFI	Stage Party Profile	DIM_PARTY_PROFIL	Party Profiling
	LE_MASTER	Master	E	Dimension

### **About Health Wearable T2Ts (Result Tables)** 22.2

Health Wearable T2Ts and their description are mentioned in the following table.

Table 244: Health Wearable T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PARTY_HEALTH_PROFILE_GL	This T2T stores the health profile guidelines for the Party. This T2T generates the goal values and the profiling based on the health of the Party. A goal is the desired result set by a Party before beginning physical activity. A Party can use the physical activity device to set the goals and track the progress. As a result, the Party can set bigger goals, eventually.
T2T_FCT_PHYSICAL_ACTIVITY_DETAILS	This T2T stores the physical activity details of the Party such as walking, running, climbing the stairs, playing soccer, and so on where energy is used.
	The sample values are walking, gardening, running, CTS, PS, dancing, exercise, and so on.
T2T_FCT_PARTY_HEALTH_PROFILE_DEFN	This T2T stores the health profile definition of the Party, which consists of the Party medical condition details with the specific critical parameters mentioned by the health organization.

The mapping details for Health Wearable T2Ts are mentioned in the following table.

Table 245: The mapping details for Health Wearable T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_HEA	Stage Party Health	FCT_PARTY_HEALT	Fact Party Health	T2T_FCT_PARTY_HEALTH
LTH_PROFILE_GL	Profile Guidelines	H_PROFILE_GL	Profile Guidelines	_PROFILE_GL
STG_PHYSICAL_A	Stage Physical	FCT_PHYSICAL_AC	Fact Physical	T2T_FCT_PHYSICAL_ACTI
CTIVITY_DETAILS	Activity Details	TIVITY_DETAILS	Activity Details	VITY_DETAILS
STG_PARTY_HEA LTH_PROFILE_DE FN	Stage Party Health Profile Definition	FCT_PARTY_HEALT H_PROFILE_DEFN	Fact Party Health Profile Definition	T2T_FCT_PARTY_HEALTH _PROFILE_DEFN

### Health IoT (Internet of Things) Result Data Flow 22.3

The data from the health wearable devices are sourced into a set of tables. The calculations are carried out in those tables and the processed outputs are stored in the FCT\_PHYSICAL\_ACTIVITY\_DETAILS, FCT\_PHYSICAL\_ACTIVITY\_SUMMARY, FCT\_PARTY\_HEALTH\_PROFILE\_DEFN, and FCT\_PARTY\_HEALTH\_PROFILE\_GL tables. The output from those tables are derived and aggregated into the FCT\_PHYSICAL\_ACTIVITY\_TRACKING tables. The same is depicted in the following illustration.

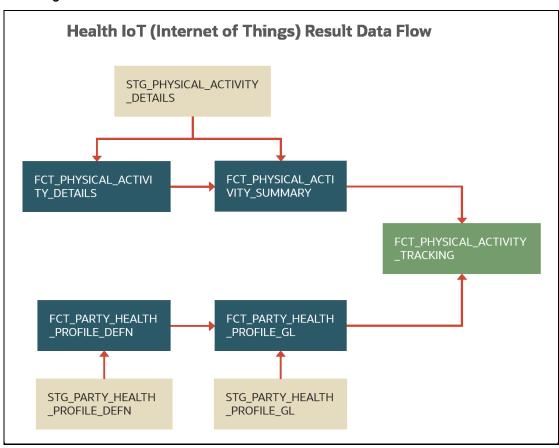


Figure 97: Health IoT Result Data Flow

### Populating the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY Table **22.4**

This section provides information about the results derived into the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY table using the Health IoT Result Tables that capture processed outputs of the Party physical activity details.

From the base table STG\_PHYSICAL\_ACTIVITY\_DETAILS, the following list of essential columns is used for derivations.

Table 246: Main columns in the STG\_VEHICLE\_DEVICE\_EVENT\_DTLS table used for calculations

Column Name	Purpose of this column	Sample of value(s) stored in the column
V_PARTY_ID	Stores the ID unique for a Party	Party001
V_PARTY_PROFILE_ID	Stores the ID unique for a Party profile	PPI001
V_PHYSCL_ACT_TYPE	Stores the physical activity type of the Party.	Running, Walking, Cycling, and so on
V_PHYSICAL_ACTIVITY_ID	For an instance of the physical activity, stores the ID for a specific time range.	Activity001
D_EXERCISE_START_DATETIME	Stores the physical activity start time and date of a Party (for a physical activity).	

Column Name	Purpose of this column	Sample of value(s) stored in the column
D_EXERCISE_END_DATETIME	Stores the physical activity end time and date of a Party (for a physical activity).	
N_ACTIVITY_DURATION	Stores the duration of a physical activity ID (such as Activity001) in minutes for the time range between D_EXERCISE_START_DATETIME and D_EXERCISE_END_DATETIME in minutes.	
N_NO_OF_CALORIES_BURNT	Stores the number of calories burnt for a physical activity ID (such as Activity001) in minutes for the time range between D_EXERCISE_START_DATETIME and D_EXERCISE_END_DATETIME in minutes.	
N_DISTANCE_RAN	Stores the measure of distance ran by a Party for a physical activity ID (such as Activity001) in kilometer (or a pre-defined standard measurement) for the time range between D_EXERCISE_START_DATETIME and D_EXERCISE_END_DATETIME in minutes.	
N_DISTANCE_WALKED	Stores the measure of distance walked by a Party for a physical activity ID (such as Activity001) in kilometer (or a pre-defined standard measurement) for the time range between D_EXERCISE_START_DATETIME and D_EXERCISE_END_DATETIME in minutes.	
N_EXERCISE_COUNT	Stores the count of exercises done by a Party for the time range between D_EXERCISE_START_DATETIME and D_EXERCISE_END_DATETIME in minutes, such as walking, running, and so on.	

## For the calculations, consider the following scenario:

- 1. The health wearable device (the device ID is stored in the column DIM\_PHYSCL\_ACT\_DEVICE.V\_PHYSCL\_ACT\_DVC\_ID) is wore by a Party with the Party ID Party001.
- **2.** The physical activity, such as walking, of the Party begins:
  - **a.** Therefore, the Device001 (V\_PHYSCL\_ACT\_DVC\_ID) records the physical activity start time and the value is stored in the D\_EXERCISE\_START\_DATETIME column.
  - **b.** In addition, when the physical activity start time is stored in the D\_EXERCISE\_START\_DATETIME column, the device begins recording this as an activity and the value Activity001 is stored in the V\_PHYSICAL\_ACTIVITY\_ID column.
  - **c.** The timestamp is stored in the D\_DATA\_FEED\_TIME\_STAMP column.
- 3. After a certain time of physical activity, the Party001 switches to another physical activity, such as running.
  - **a.** Therefore, the Device001 records the Party001 physical activity status as end of Activity001. The date and time are stored in the D\_EXERCISE\_END\_DATETIME column.
  - **b.** Instantly, the Device001 begins recording running as the next activity and the value Activity002 is stored in the V\_PHYSICAL\_ACTIVITY\_ID column.

- **c.** Therefore, the date and time stored in the D\_EXERCISE\_END\_DATETIME column for Activity001 becomes the physical activity start time of Activity002 and the value is stored in the D\_EXERCISE\_START\_DATETIME column.
- **d.** The timestamp continues to store in the D\_DATA\_FEED\_TIME\_STAMP column.

## Topic:

• Results Derived using the Calculations

# 22.4.1 Results Derived using the Populated Data

This section provides information about how the following results are derived for a physical activity of a Party:

- Total time duration
- Total number of calories burnt
- Total distance ran
- Total distance walked
- Total exercise count
- Average time duration
- Average number of calories burnt
- Average distance ran
- Average distance walked
- Average exercise count

The following additional columns are used for the sum and average calculations:

Table 247: Additional columns used for derivation from the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY table

Column Name	Purpose of this column
D_PERIOD_START_DATE	Stores the start time and date of a Party for the cumulative activity IDs specific to a physical activity.
D_PERIOD_END_DATE	Stores the end time and date of a Party for the cumulative activity IDs specific to a physical activity.

## 22.4.1.1 Calculation of total time duration of a physical activity

The calculation of the total time duration of an activity is explained as follows.

Table 248: Explanation of the different stages of total time duration calculation for an activity

Sequence Number	Calculation Stage Description	Remarks
1	The difference in the values between D_EXERCISE_END_DATETIME and D_EXERCISE_START_DATETIME results in the time duration of an activity ID for a physical activity type.	This time difference for that activity ID is stored in the column FCT_PHYSICAL_ACTIVITY_DETAILS.N_ACTIVITY_DURATION in minutes.

Sequence Number	Calculation Stage Description	Remarks
2	The preceding calculation is repeated for the consecutive activity IDs for a physical activity type.	For the date range between the columns D_PERIOD_START_DATE and D_PERIOD_END_DATE.
3	The summation of the preceding calculation results in the total time duration for a physical activity type.	The result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOT_ACTIVITY_DURATION.

In a similar method, the total time duration for different physical activities can be calculated. In addition, the total time duration can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Calculation of total number calories burnt for a physical activity 22.4.1.2

The calculation of the total number of calories burnt for an activity is explained as follows.

Table 249: Explanation of the different stages of total number of calories burnt calculation for an activity

Sequence Number	Calculation Stage Description	Remarks
1	For the difference in the values between D_EXERCISE_END_DATETIME and D_EXERCISE_START_DATETIME, the calories burnt for an activity ID for a physical activity type is recorded by the Health Wearable device.	The calories burnt for an activity ID is stored in the column FCT_PHYSICAL_ACTIVITY_DETAILS.N_NO_OF_CALORIES_BURNT.
2	The preceding calculation is repeated for the consecutive activity IDs for a physical activity type.	For the date range between the columns D_PERIOD_START_DATE and D_PERIOD_END_DATE.
3	The summation of the preceding calculation results in the total calories burnt for a physical activity type.	The result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_OF_CALORIES_BUR NT.

In a similar method, the total calories burnt for different physical activities can be calculated. In addition, the total calories burnt can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Calculation of total distance ran by a Party 22.4.1.3

The calculation of the total distance ran by a Party is explained as follows.

Table 250: Explanation of the different stages of total distance ran by a Party

Sequence Number	Calculation Stage Description	Remarks
1	For the difference in the values between D_EXERCISE_END_DATETIME and D_EXERCISE_START_DATETIME, the distance ran for an activity ID is recorded by the Health Wearable device.	The distance ran for an activity ID is stored in the column FCT_PHYSICAL_ACTIVITY_DETAILS.N_DISTANCE_RAN in a predefined standard unit of measurement.

Sequence Number	Calculation Stage Description	Remarks
2	The preceding calculation is repeated for the consecutive activity IDs for running.	For the date range between the columns D_PERIOD_START_DATE and D_PERIOD_END_DATE.
3	The summation of the preceding calculation results in the total distance ran.	The result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_DISTANCE_RAN.

In a similar method, the total distance ran by a Party can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

## 22.4.1.4 Calculation of total distance walked by a Party

The calculation of the total distance walked by a Party is explained as follows.

Table 251: Explanation of the different stages of total distance walked by a Party

Sequence Number	Calculation Stage Description	Remarks
1	For the difference in the values between D_EXERCISE_END_DATETIME and D_EXERCISE_START_DATETIME, the distance walked for an activity ID is recorded by the Health Wearable device.	The distance walked for an activity ID is stored in the column FCT_PHYSICAL_ACTIVITY_DETAILS.N_DISTANCE_WALKED in a predefined standard unit of measurement.
2	The preceding calculation is repeated for the consecutive activity IDs for walking.	For the date range between the columns D_PERIOD_START_DATE and D_PERIOD_END_DATE.
3	The summation of the preceding calculation results in the total distance walked.	The result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_DISTANCE_WALKED.

In a similar method, the total distance walked can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

## 22.4.1.5 Calculation of total exercise count

The calculation of the total exercise count for a Party is explained as follows.

Table 252: Explanation of the different stages of total exercise count for a Party

Sequence Number	Calculation Stage Description	Remarks
1	For the difference in the values between D_EXERCISE_END_DATETIME and D_EXERCISE_START_DATETIME, the exercise count for an activity ID is recorded by the Health Wearable device.	The exercise count for an activity ID is stored in the column FCT_PHYSICAL_ACTIVITY_DETAILS.N_EXERCISE_COUNT.
2	The preceding calculation is repeated for the consecutive activity IDs for exercise count.	For the date range between the columns D_PERIOD_START_DATE and D_PERIOD_END_DATE.
3	The summation of the preceding calculation results in the total exercise count.	The result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOT_EXERCISE_COUNT.

In a similar method, the total exercise count can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Calculation of average time duration of a physical activity 22.4.1.6

The calculation of the average time duration of an activity is explained as follows.

Table 253: Explanation of the different stages of average time duration calculation for an activity

Sequence Number	Calculation Stage Description	Remarks
1	The total time duration of a particular activity between D_PERIOD_START_DATE and D_PERIOD_END_DATE is calculated as depicted in the section <u>Calculation of total time</u> <u>duration of a physical activity</u> .	This result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOT_ACTIVITY_DURATION in minutes.
2	The preceding calculation is divided by the number of same activity instances.	The result is the average time duration for an activity and it is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_AVG_ACTIVITY_DURATION.

In a similar method, the average time duration for different physical activities can be calculated. In addition, the average time duration can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Calculation of average number of calories burnt **22.4.1.7**

The calculation of the average number of calories burnt for an activity is explained as follows.

Table 254: Explanation of the different stages of the average number of calories burnt calculation for an activity

Sequence Number	Calculation Stage Description	Remarks
1	The total calories burnt for a particular activity between D_PERIOD_START_DATE and D_PERIOD_END_DATE is calculated as depicted in the section <u>Calculation of total number calories burnt for a physical activity</u> .	This result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_OF_CALORIES_BURNT.
2	The preceding calculation is divided by the number of same activity instances.	The result is the average number of calories burnt for an activity and it is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_AVERAGE_OF_CALORIES_BUR NT.

In a similar method, the average calories burnt for different physical activities can be calculated. Also, the average calories burnt can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Calculation of average distance ran 22.4.1.8

The calculation of the average distance ran is explained as follows.

Table 255: Explanation of the different stages of the average distance ran calculation

Sequence Number	Calculation Stage Description	Remarks
1	The total distance ran between D_PERIOD_START_DATE and D_PERIOD_END_DATE is calculated as depicted in the section Calculation of total distance ran by a Party.	This result is stored in the column  FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_DISTANCE_RAN in a  pre-defined standard unit of measurement.
2	The preceding calculation is divided by the number of running activity instances.	The result is the average distance ran by a Party and it is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_AVERAGE_DISTANCE_RAN.

In a similar method, the average distance ran by a Party can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile

#### Calculation of average distance walked 22.4.1.9

The calculation of the average distance walked is explained as follows.

Table 256: Explanation of the different stages of the average distance walked calculation

Sequence Number	Calculation Stage Description	Remarks
1	The total distance walked between D_PERIOD_START_DATE and D_PERIOD_END_DATE is calculated as depicted in the section <u>Calculation of total distance walked by a Party</u> .	This result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOTAL_DISTANCE_WALKED in a pre-defined standard unit of measurement.
2	The preceding calculation is divided by the number of walking activity instances.	The result is the average distance walked by a Party and it is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_AVERAGE_DISTANCE_RAN.

In a similar method, the average distance walked can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

## 22.4.1.10 Calculation of average exercise count

The calculation of the average exercise count for a physical activity is explained as follows.

Table 257: Explanation of the different stages of the average exercise count for a physical activity

Sequence Number	Calculation Stage Description	Remarks
1	The total exercise count for a physical activity between D_PERIOD_START_DATE and D_PERIOD_END_DATE is calculated as depicted in the section <a href="Calculation of total">Calculation of total</a> exercise count.	This result is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_TOT_EXERCISE_COUNT.

Sequence Number	Calculation Stage Description	Remarks
2	The preceding calculation is divided by the number of same physical activity instances.	The result is the average exercise count for a physical activity and it is stored in the column FCT_PHYSICAL_ACTIVITY_SUMMARY.N_AVG_EXERCISE_COUNT.

In a similar method, the average exercise count can be calculated for a date range of a day, a week, a month, or a year by using the columns D\_PERIOD\_START\_DATE and D\_PERIOD\_END\_DATE for a Party and Party Profile.

#### Populating the FCT\_PHYSICAL\_ACTIVITY\_TRACKING Table 22.5

This section provides information about the results derived into the FCT\_PHYSICAL\_ACTIVITY\_TRACKING table using the Health IoT Result table FCT PARTY HEALTH PROFILE GL and the Health IoT Result derived table FCT PHYSICAL ACTIVITY SUMMARY.

#### 22.5.1 Results derived from the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY table

This section contains information about the result derivations in the FCT\_PHYSICAL\_ACTIVITY\_TRACKING table. The data into the FCT\_PHYSICAL\_ACTIVITY\_TRACKING columns are derived from the FCT\_PHYSICAL\_ACTIVITY\_SUMMARY table columns

Table 258: The data derived into the FCT PHYSICAL ACTIVITY TRACKING columns from the FCT PHYSICAL ACTIVITY SUMMARY table columns

The column in the FCT_PHYSICAL_ACTIVITY_SUMMARY table	Purpose of the column	The resultant column in the FCT_PHYSICAL_ACTIVITY_TRACKING table
N_MIS_DATE_SKEY	Stores the Extraction Surrogate Key after lookup from DIM_DATES with N_DATE_SKEY.	N_MIS_DATE_SKEY
N_PHYSCL_ACT_TYPE_SKEY	Stores the physical activity type Surrogate Key.	N_PHYSCL_ACT_TYPE_SKEY
D_PERIOD_END_DATE	Stores the end time and date of a Party for the cumulative activity IDs specific to a physical activity.	D_PERIOD_END_DATE
D_PERIOD_START_DATE	Stores the start time and date of a Party for the cumulative activity IDs specific to a physical activity.	D_PERIOD_START_DATE
N_PARTY_SKEY	Stores the Party Surrogate Key after lookup from DIM_PARTY.	N_PARTY_SKEY
N_PARTY_PROFILE_SKEY	Stores the Party Profile Surrogate Key after lookup from DIM_PARTY_PROFILE.	N_PARTY_PROFILE_SKEY
N TOTAL DISTANCE RAN or N TOTAL DISTANCE WALKED or N TOT EXERCISE COUNT	Based on the physical activity type, the goal achieved value is populated and stored.	N_GOAL_ACHIEVED_VALUE

#### Results derived from the FCT PARTY HEALTH PROFILE GL table 22.5.2

This section contains information about the result derivations in the FCT\_PHYSICAL\_ACTIVITY\_TRACKING table. The data into the FCT\_PHYSICAL\_ACTIVITY\_TRACKING columns are derived from the FCT\_PARTY\_HEALTH\_PROFILE\_GL table columns.

Table 259: The data derived into the FCT\_PHYSICAL\_ACTIVITY\_TRACKING columns from the FCT\_PARTY\_HEALTH\_PROFILE\_GL table columns

The column in the FCT_PARTY_HEALTH_PROFILE_GL table	Purpose of the column	The resultant column in the FCT_PHYSICAL_ACTIVITY_TRACKING table
N_ACTIVITY_GOAL_SKEY	Stores the Activity Goal Surrogate Key after lookup from DIM_ACTIVITY_GOAL with N_ACTIVITY_GOAL_SKEY.	N_ACTIVITY_GOAL_SKEY

#### Populating the goal status 22.5.2.1

This section provides information about populating the goal status based on the goal achieved by the Party.

Table 260: Goal Status population scenarios using the goal achieved by the Party

Scenario	FCT_PHYSICAL_ACTIVITY_TRACKING. N_GOAL_STATUS	Result
FCT_PHYSICAL_ACTIVITY_TRACKING.N_GOAL_ACHIEVED_VALUE is less than FCT_PARTY_HEALTH_PROFILE_GL.N_GOAL_LOWER_VALUE and the difference is above 5%	0	Fail
(The goal achieved is lesser than the goal lower value, and the difference between the goal achieved and goal lower value is above 5%)		
FCT_PHYSICAL_ACTIVITY_TRACKING.N_GOAL_ACHIEVED_VALUE is between FCT_PARTY_HEALTH_PROFILE_GL.N_GOAL_UPPER_VALUE and FCT_PARTY_HEALTH_PROFILE_GL.N_GOAL_LOWER_VALUE (The goal achieved lies between the goal upper value and the goal lower value)	1	Pass
FCT_PHYSICAL_ACTIVITY_TRACKING.N_GOAL_ACHIEVED_VALUE is more than FCT_PARTY_HEALTH_PROFILE_GL.N_GOAL_UPPER_VALUE and the difference is above 5%	2	Achieved more than the set goal
(The goal achieved is higher than the goal upper value, and the difference between the goal achieved and goal upper value is above 5%)		

The following illustration depicts the preceding table information.

Goal Lower Value **Goal Upper Value Pass** Fail Goal 0 1 2 +5% +5%

Figure 98: Depiction of the goal status

The following illustration depicts the goal status with an example.

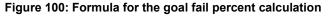
Completed 7000 steps of walking Goal of walking Fail 5000 to 6000 2

Figure 99: Depiction of the goal status with example

The goal status can be populated on a weekly, monthly, or yearly basis using the V\_PERIOD\_TYPE column.

#### Calculation of goal fail percent 22.5.2.2

When the goal achieved value (FCT\_PHYSICAL\_ACTIVITY\_TRACKING.N\_GOAL\_ACHIEVED\_VALUE) is less than the goal lower value (FCT\_PARTY\_HEALTH\_PROFILE\_GL.N\_GOAL\_LOWER\_VALUE), then the goal fail percent is calculated using the following formula:





# **22.6** Deploying Stream Data Tables for the Health Wearables on Hive

All RDBMS-related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>.

# 22.7 Populating Stream Data Dimension Tables for the Health Wearables

Follow this SCD process to populate data into any Stream Data Dimension table for the Health Wearables:

NOTE

You can also follow this SCD process to populate data into any Hive-related Stream Data Dimension table.

- **1.** To populate data into any Stream Data Dimension table for the Health Wearables, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Stream Data Dimension table for the Health Wearables, follow the procedure <a href="Check the Execution Status of the SCD Batch">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# **22.8** Populating Stream Data T2T Result Tables for the Health Wearables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.

**3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics 22.9**

You can see the following topics related to other function-specific tables:

- **Insurance Contracts Tables**
- Insurance Claims Tables

# 23 Pandemic Data and Hospital Capacity Data Tables

This section provides information about the Pandemic Data and Hospital Capacity Data tables.

## **Topics:**

- Pandemic Data Table
- Hospital Capacity Data Table
- Deploying Pandemic Data and Hospital Capacity Data Tables on Hive
- Populating Pandemic Data and Hospital Capacity Data T2T Result Tables
- Related Topics

## 23.1 Pandemic Data Table

Pandemic is the outbreak of a disease across a wide geographical area affecting a large number of people. A few examples of the pandemic are SARS, MERS, Zika, Ebola, COVID-19, and so on.

During a pandemic, the public authority of each affected region generally provides data about the number of people affected by that pandemic and the areas where the outbreak has occurred.

OIDF supports the storage of the country level pandemic data details in the categories of positive cases, count of hospitalized people, count of recovered people, death count, ventilator count, and so on.

## 23.1.1 About Pandemic Data T2T (Result Table)

Pandemic Data T2T and its description are given here.

Table 261: Pandemic Data T2T and its description

T2T Name	T2T Description
T2T_FCT_PANDEMIC_DATA	This T2T stores the details of pandemic data such as positive cases, current active cases, newly and total hospitalized count, new and total ICU count, negative test count, recovered count, death count, ventilator count, and so on in the specific country. This data can be sourced from independent data sources such as John Hopkins, New York Times, or the World Health Organization, whichever is available in a given location.

The mapping details for Pandemic Data T2T is given here.

Table 262: The mapping details for Pandemic Data T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PANDEMIC_	Stage Pandemic	FCT_PANDEMIC_D	Fact Pandemic	T2T_FCT_PANDEMIC_DA
DATA	Data	ATA	Data	TA

#### **Hospital Capacity Data Table 23.2**

The public authority responsible for handling the Pandemic Data may also provide data regarding the capacity of the healthcare sector of the area.

OIDF supports the storage of the region level hospital capacity data in the categories of bed count for different severity levels and ICU beds per unit of the population.

#### **About Hospital Capacity Data T2T (Result Table)** 23.2.1

Hospital Capacity T2T and its description are given here.

Table 263: Hospital Capacity T2T and its description

T2T Name	T2T Description
T2T_FCT_HOSPITAL_CAPACITY_DATA	This T2T stores the details of hospital capacity data such as bed count for critical care and acute care, ICU count, total bed count in a hospital, and critical care, acute care, and ICU beds per 100,000 of the population in a region. This data can be sourced from the local medical system, the local health system, or the World Health Organization, whichever is available in a given location.

The mapping details for Hospital Capacity T2T is given here.

Table 264: The mapping details for Hospital Capacity T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PANDEMIC_	Stage Pandemic	FCT_PANDEMIC_D	Fact Pandemic	T2T_FCT_PANDEMIC_DA
DATA	Data	ATA	Data	TA

## **Deploying Pandemic Data and Hospital Capacity Data 23.3 Tables on Hive**

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

## **Populating Pandemic Data and Hospital Capacity Data 23.4 T2T Result Tables**

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **Related Topics 23.5**

You can see the following topics related to other function-specific tables:

- Party Subject Area
- **Insurance Contracts Tables**
- **Insurance Claims Tables**

# **24** Common Account Summary Tables

This section provides information about Common Account Summary tables in the Oracle Insurance Data Foundation application such as Asset and other Account Summary, Trading and Investment, Instruments Contracts, and Capital and Borrowings, and step-by-step instructions to use this section.

## **Topics:**

- Abstract
- Trading and Investments Contract Tables
- Macroeconomic Variable Tables
- Capital Instruments Position and Transactions Tables
- Other Common Account Summary Tables
- Abstract of Common Account Summary Result Tables
- <u>Deploying Common Account Summary Tables on Hive</u>
- Populating Common Account Summary Dimension Tables
- Populating Common Account Summary T2T Result Tables

## 24.1 Abstract

For an Insurance company, this entity stores account covering their exposures to Trading, Investment as well as Loans.

OIDF Subject Area of Trading and Investment refers to the significant portion of assets of the Insurance Company. Trading and Investment Subject Area comprise of following types of entities:

- Contracts: Investment Contracts refers to a contract or transaction or scheme where entity invest
  money either on its own behalf or on behalf of their clients with the expectation of profit from sale
  or holding of such investment.
- **Instrument:** Tradable investments use instruments with ISIN or CUSIP or Other known identifiers. Instrument definition most commonly is published by the issuer of instrument, which can be another public or private or government entity or stock exchange.

Investment contracts refer to a contract or transaction or scheme where entity invest money either on its own behalf or on behalf of their clients with the expectation of profit from sale or holding of such investment. Capital Instruments also make use of the same relevant instrument set of tables.

## **Contracts**

OIDF has different entities known as product processors to hold a variety of instrument types. Given below is the list of trading and investment product processors.

### **Instruments**

Instrument refers to an issue or derivative contract which is tradable in the market. Over the counter, contracts are considered as instruments. Thus Government bonds, municipal bonds, futures contracts, option contracts and excludes forwards, swap contracts, and so on. Multiple contracts in product processor entities mentioned above can have the same instrument traded.

The following table explains the need for creating an instrument before populating the contract for a given product processor.

Table 265: The need for creating an instrument for a given product processor

Product Processor	A record in instrument contract master and dimension is required?
Stage Investments	Yes for Exchange Traded Contracts.
Stage MM Contracts	Yes for Exchange Traded Contracts.
Stage Futures	Yes
Stage Option Contracts	Yes
Stage Credit Derivatives	Yes for Exchange Traded Contracts.
Stage FX Contracts	No
Stage Forwards	No
Stage Mutual Funds	Yes
Stage Commodities	Yes for Exchange Traded Contracts.

#### **Trading and Investments Contract Tables** 24.2

This section provides Instrument, Trading and Investments Contract table details.

## **Topics:**

- Instruments Tables
- About Trading and Investments Contract T2Ts (Result Tables)

#### **Instruments Tables** 24.2.1

#### **About Instruments Dimension Tables** 24.2.1.1

Instruments Dimension table names and their description are given here.

Table 266: Instruments Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Instruments Contracts Dimension	This table stores data related to contracts and instruments in the market and their details such as Effective Date, Maturity Date, Face Value, Day Convention, Strike, and so on.
Geography Dimension	This table stores a distinct list of all geographical locations, where any of the transaction channels of the Insurance Company are located.

The mapping details for the Instruments Dimension tables are given here.

Table 267: The mapping details for the Instruments Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
69	STG_INSTRUMEN T_CONTRACT_M ASTER	Stage Instrument Contract Master	DIM_INSTRUMENT_ CONTRACT	Instrument Contract Dimension
64	STG_GEOGRAPH Y_MASTER	Stage Geography Master	DIM_GEOGRAPHY	Geography Dimension

## **24.2.1.2** About Instruments T2T (Result Table)

Instruments Contracts T2Ts and their description are given here.

Table 268: Instruments Contracts T2Ts and their description

T2T Name	T2T Description
T2T_STG_MM_CAS	This T2T stores the details of the Money Market contract. For example Certificates of Deposit (CDs), U.S. Treasury bills, commercial paper, municipal notes, federal funds, and so on. The money market is used by a wide array of participants, from a company raising money by selling commercial paper into the market to an investor purchasing CDs as a safe place to park money for the short term.
T2T_STG_OPTIONS_CAS	This T2T stores records of call and put options that are bought (long) or sold (short) by the customer.
T2T_STG_FUTURES_CAS	This T2T stores the details of the Futures contract.
T2T_STG_CREDIT_DERIVATIVES_CAS	This T2T stores the details of the Credit Derivatives contract.
T2T_STG_COMMODITIES_CAS	This T2T stores the details of Commodities contract.
T2T_STG_SWAPS_CONTRACTS_CAS	This T2T stores the details of the swaps contract.
T2T_STG_FX_CONTRACTS_CAS	This T2T stores the details of Foreign Exchange contracts.

The mapping details for the Instruments T2Ts are given here.

Table 269: The mapping details for the Instruments T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_MM_CONTRA	Stage Money	FCT_COMMON_ACC	Fact Common	T2T_STG_MM_CAS
CTS	market Contracts	OUNT_SUMMARY	Account Summary	
STG_OPTION_CON	Stage Option contracts	FCT_COMMON_ACC	Fact Common	T2T_STG_OPTIONS_
TRACTS		OUNT_SUMMARY	Account Summary	CAS
STG_FUTURES	Stage Futures	FCT_COMMON_ACC OUNT_SUMMARY	Fact Common Account Summary	T2T_STG_FUTURES_ CAS

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CREDIT_DERI	Stage Credit	FCT_COMMON_ACC	Fact Common	T2T_STG_CREDIT_D
VATIVES	Derivatives	OUNT_SUMMARY	Account Summary	ERIVATIVES_CAS
STG_COMMODITIE	Stage Commodities	FCT_COMMON_ACC	Fact Common	T2T_STG_COMMODI
S		OUNT_SUMMARY	Account Summary	TIES_CAS
STG_SWAPS_CON	Stage Swap	FCT_COMMON_ACC	Fact Common	T2T_STG_SWAPS_C
TRACTS	Contracts	OUNT_SUMMARY	Account Summary	ONTRACTS_CAS

#### **About Trading and Investments Contract T2Ts (Result Tables)** 24.2.2

Trading and Investments Contract T2Ts and their description is given here.

Table 270: Trading and Investments Contract T2Ts and their description

T2T Name	T2T Description
T2T_STG_INVESTMENTS_CAS	This T2T stores the details of the investment contract. For example, Government and Municipal Bonds, Covered/Secured Bonds, Corporate Bonds, and so on.
T2T_STG_MUTUAL_FUNDS_CAS	This T2T stores the details of the Mutual Fund contract.
T2T_FCT_FUND_CIS_COMPOSITION	This T2T stores the composition details of the Investment Funds.
T2T_FCT_INSTRUMENT_RATING_DETAILS	This T2T stores the rating of trading instruments including the Mitigants that are tradable.
T2T_FCT_INSTRUMENT_MARKET_PRICES	This T2T stores relevant information about breach or penalty levied by the regulator in respect of- Domestic Regulatory Liquidity requirements (CRR and SLR) for all branches including overseas branches.
T2T_STG_TRADING_ACCOUNT_CAS	This T2T stores the details such as product type traded in the accounts such as Equities, Corporate Debt, and the degree of risk the customer is willing to take on the investments in this account, the total net value of all the assets associated with this account, and so on.

The mapping details for the Trading and Investments Contract T2Ts are given here.

Table 271: The mapping details for the Trading and Investments Contract T2Ts

SOURCE TABLE NAME	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INVESTMENT	Stage Investments	FCT_COMMON_AC	Fact Common	T2T_STG_INVESTMEN
S		COUNT_SUMMARY	Account Summary	TS_CAS
STG_MUTUAL_FU	Stage Mutual Funds	FCT_COMMON_AC	Fact Common	T2T_STG_MUTUAL_FU
NDS		COUNT_SUMMARY	Account Summary	NDS_CAS

SOURCE TABLE NAME	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_FUND_CIS_C	Stage Fund CIS	FCT_FUND_CIS_CO	Fact Fund CIS	T2T_FCT_FUND_CIS_C
OMPOSITION	Composition	MPOSITION	Composition	OMPOSITION
STG_INSTRUMENT	Stage Instrument	FCT_INSTRUMENT_	Fact Instrument	T2T_FCT_INSTRUMEN T_RATING_DETAILS
_RATING_DETAILS	Rating Details	RATING_DETAILS	Rating Details	
STG_INSTRUMENT	Stage Instrument	FCT_INSTRUMENT_	Fact Instrument	T2T_FCT_INSTRUMEN T_MARKET_PRICES
_MARKET_PRICES	Market Prices	MARKET_PRICES	Market Prices	
STG_TRADING_AC COUNT	Stage Trading	FCT_COMMON_AC	Fact Common	T2T_STG_TRADING_AC
	Account	COUNT_SUMMARY	Account Summary	COUNT_CAS

For information about Instrument Options, see <u>Guaranteed Benefits and Embedded Options</u> and <u>Embedded Options Tables</u>.

# 24.3 Macroeconomic Variable Tables

Macroeconomic variables are the indicators that point to the current trends in the economy and the factors affecting the economy. These variables are used to get behavioral data of the market systems operating on a large scale and to understand how different sectors of the economy are related to each other.

OIDF supports the data storage of different macroeconomic variable values across different regions. This stored data contains both historical values and future projections. This data is used in LLFP (OFS IFRS Application Pack) to compute the probability of default using the Cox proportional-hazards model.

## 24.3.1 About Macroeconomic Variable Dimension Table

Macroeconomic Variable Dimension table name and its description are given here.

Table 272: Macroeconomic Variable Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Macroeconomic Variable Dimension	This table stores dimension data related to the macroeconomic variables. This table is seeded by the LLFP application (OFS IFRS Application Pack). It contains different macroeconomic variable names, descriptions, and the type of value (absolute or percent).

The mapping details for the Macroeconomic Variable Dimension table is given here.

Table 273: The mapping details for the Macroeconomic Variable Dimension table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
852	STG_MACRO_ECON	Stage Macro Economic	DIM_MACRO_ECON	Macroeconomic
	OMIC_VARIABLE	Variable	OMIC_VARIABLE	Variable Dimension

#### **About Macroeconomic Variable T2T (Result Table) 24.3.2**

Macroeconomic Variable T2T and its description are given here.

Table 274: Macroeconomic Variable T2T and its description

T2T Name	T2T Description
T2T_FCT_MACRO_ECONOMIC_VAR_DTLS	This T2T stores the data for different macroeconomic variable values across different regions. This T2T contains both historical values and future projections. This data is used in LLFP (OFS IFRS Application Pack) to compute the probability of default using the Cox proportional-hazards model.

The mapping details for Macroeconomic Variable T2T is given here.

Table 275: The mapping details for Macroeconomic Variable T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_MACRO_EC ONOMIC_VAR_D TLS	Stage Macro Economic Variable Details	FCT_MACRO_ECON OMIC_VAR_DTLS	Fact Macro Economic Variable Details	T2T_FCT_MACRO_ECONO MIC_VAR_DTLS

### **Capital Instruments Position and Transactions Tables 24.4**

Capital Instruments Position and Transactions tables pertain to the capital instrument and transactional part of the balance sheet of a financial institution. It covers capital instruments such as Equity and Debt along with non-retail borrowings done by financial institutions.

#### **About Capital and Borrowings T2Ts (Result Tables)** 24.4.1

Capital Instruments Position and Transactions T2Ts and their description are given here.

Table 276: Capital Instruments Position and Transactions T2Ts and their description

T2T Name	T2T Description
T2T_FCT_CAP_INSTR_POSITIONS	This T2T stores the regulatory position of capital instruments and details of treatment to the capital instruments under I and III regulations.
T2T_FCT_CAP_INSTR_TXNS	This T2T stores the transactions on the capital instruments. The entity stores settled and unsettled transactions differentiated by mnemonic codes. It also stores the transactions that are settled with cash or with other means such as securities.
T2T_FCT_INSTR_PROPOSED_TXNS	This T2T stores the proposed set of instruments that will be transacted by the Insurance Company.

The mapping details for the Capital Instruments Position and Transactions T2Ts are given here.

Table 277: The mapping details for the Capital Instruments Position and Transactions T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CAP_INSTR_P OSITIONS	Stage Capital Instrument Positions	FCT_CAP_INSTR_P OSITIONS	Fact Capital Instrument Positions	T2T_FCT_CAP_INSTR _POSITIONS
STG_CAP_INSTR_T XNS	Stage Capital Instrument Transactions	FCT_CAP_INSTR_T XNS	Fact Capital Instrument Transactions	T2T_FCT_CAP_INSTR _TXNS
STG_INSTR_PROP OSED_TXNS	Stage Instrument Proposed Transactions	FCT_INSTR_PROPO SED_TXNS	Fact Instrument Proposed Transactions	T2T_FCT_INSTR_PR OPOSED_TXNS

# 24.5 Other Common Account Summary Tables

Other Common Account Summary T2Ts and their description, and T2T mapping details are given here. The target table is Fact Common Account Summary (FCT\_COMMON\_ACCOUNT\_SUMMARY).

Table 278: Other Common Account Summary T2Ts and their description, and T2T mapping details

Source Table Name	Logical Stage Table Name	T2T Name	T2T Description
STG_REPO_CONTRA CTS	Stage Reporting Contracts	T2T_STG_REPO_CONT RACTS_CAS	This T2T stores the details of repurchase contracts.
STG_CUSTODIAL_AC COUNTS	Stage Custodial Accounts	T2T_STG_CUSTODIAL_ ACCOUNTS_CAS	This T2T stores the details of all accounts held in a custodial capacity.
STG_MANAGED_INV _ADV	Stage Managed Investment Advances	T2T_STG_MANAGED_I NV_ADV_CAS	This T2T stores the details of all managed investment account and other services.
STG_TRUSTS	Stage Trusts	T2T_STG_TRUSTS_CAS	This T2T stores the trust accounts held by the financial institution of their customers. The Trust account acts as a parent account for the savings or deposits held underneath and maintained in CASA or TD tables.

# 24.6 Abstract of Common Account Summary Result Tables

Customer account-level data from the Oracle Financial Services Analytical Applications (OFSAA) staging product processor tables must be consolidated into a standardized relational Business Intelligence (BI) data model. This consolidation is done to have all the staging product processor table data in a single Fact table. The Common Account Summary tables data can be used for building cubes, which allow rollup of

data for a dimension or a combination of dimensions. This relational BI model consists of the following vertically partitioned Common Account Summary tables that are organized by the application subject area.

The preceding Common Account Summary tables are part of the data model but there are no seeded T2T definitions available to populate these tables. T2T processes must be custom configured to populate these tables to use measures defined on these tables for reporting.

# 24.7 Deploying Common Account Summary Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

NOTE

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 24.8 Populating Common Account Summary Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- **1.** To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 24.9 Populating Common Account Summary T2T Result Tables

**NOTE** 

Ensure to load FCT\_COMMON\_ACCOUNT\_SUMMARY and FSI\_EXCHANGE\_RATES tables prior to loading any of the other Account Summary tables.

Ensure to manually configure the SETUP\_MASTER table with required GAAP\_CODEs before executing Account Summary Population T2Ts. For an account, load only one GAAP\_CODE to Fact Common Account Summary table. By default, OIDF installer seeds the following entry into SETUP\_MASTER. When executing through a batch, the RUNSkey defaults to -1.

Follow this T2T process to populate data into any T2T Result table:

**NOTE** Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **Loan Account Summary Tables** 25

This section provides information about Loan Account Summary tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Loan Account Summary T2T (Result Table)
- **Deploying Loan Account Summary Tables on Hive**
- Populating Loan Account Summary T2T Result Tables
- **Related Topics**

Loan Account Summary provides a detailed report of insurance transactions done.

Loan Account in Insurance is used, when an insured takes a loan against his or her policy. The policy code is used to track the loan and its outstanding amount for the reporting if the policy is closed and then decided how to treat the loan.

#### **About Loan Account Summary T2T (Result Table) 25.1**

Loan Account Summary T2T and its description is given here.

Table 279: Loan Account Summary T2T and its description

T2T Name	T2T Description
T2T_FLAS_STG_LOAN_CONTRACTS	This T2T stores the details of loan contracts. This table includes mortgage and vehicle loans.

The mapping details for the Loan Account Summary T2T is given here.

Table 280: The mapping details for the Loan Account Summary T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_LOAN_CON	Stage Loan	FCT_LOAN_ACCOU	Fact Loan Account	T2T_FLAS_STG_LOAN_
TRACTS	Contracts	NT_SUMMARY	Summary	CONTRACTS

#### **Deploying Loan Account Summary Tables on Hive 25.2**

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

# 25.3 Populating Loan Account Summary T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - b. Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# 25.4 Related Topics

You can see the following topics related to other function-specific tables:

- Insurance Contracts Tables
- Insurance Claims Tables
- Placed Collateral Tables
- Transaction Summary Tables

# **26 Fiduciary Services Investment Summary Population**

This section provides information about Fiduciary Services Investment Summary Population in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Fiduciary Services Investment Summary T2T (Result Table)
- Deploying Fiduciary Services Investment Summary Result Tables on Hive
- Populating Fiduciary Services Investment Summary T2T Result Tables
- Related Topics

A fiduciary is responsible for managing the assets of another person, or of a group of people. The fiduciary is expected to manage the assets for the benefit of the customer. The customer can open a trust account that may have different investments that the person may do. The customer may have different assets under the trust such as Investments, Mutual Funds, and so on. Therefore, in these T2Ts the target table is loaded only with those records, which are of fiduciary service type, which is identified using Parent Account Number in each Product Processor table.

# 26.1 About Fiduciary Services Investment Summary T2T (Result Table)

Fiduciary Services Investment Summary T2Ts and their description are given here.

Table 281: Fiduciary Services Investment Summary T2Ts and their description

T2T Name	T2T Description
T2T_FFSIS_STG_CUSTODIAL_ACCOUNTS	This T2T stores the details of all accounts held in a custodial capacity.
T2T_FFSIS_STG_INVESTMENTS	This T2T stores the details of the investment contract.
T2T_FFSIS_STG_MANAGED_INV_ADV	This T2T stores details of all managed investment account and other services.
T2T_FFSIS_STG_MUTUAL_FUNDS	This T2T stores details of all mutual funds contracts.
T2T_FFSIS_STG_TRUSTS	This T2T stores the details of the trust account.

The mapping details for the Fiduciary Services Investment Summary T2Ts are given here.

Table 282: The mapping details for the Fiduciary Services Investment Summary T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CUSTODIA L_ACCOUNTS	Stage Custodial Accounts	FCT_FIDUCIARY_ SERV_INVST_SU MM	Fact Fiduciary Services Investment Summary	T2T_FFSIS_STG_CUSTODIAL _ACCOUNTS

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INVESTME NTS	Stage Investments	FCT_FIDUCIARY_ SERV_INVST_SU MM	Fact Fiduciary Services Investment Summary	T2T_FFSIS_STG_INVESTMEN TS
STG_MANAGED _INV_ADV	Stage Managed Investment Advances	FCT_FIDUCIARY_ SERV_INVST_SU MM	Fact Fiduciary Services Investment Summary	T2T_FFSIS_STG_MANAGED_ INV_ADV
STG_MUTUAL_F UNDS	Stage Mutual Funds	FCT_FIDUCIARY_ SERV_INVST_SU MM	Fact Fiduciary Services Investment Summary	T2T_FFSIS_STG_MUTUAL_F UNDS
STG_TRUSTS	Stage Trusts	FCT_FIDUCIARY_ SERV_INVST_SU MM	Fact Fiduciary Services Investment Summary	T2T_FFSIS_STG_TRUSTS

# **26.2** Deploying Fiduciary Services Investment Summary Result Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List</u> of <u>Unsupported T2Ts</u>

# **26.3** Populating Fiduciary Services Investment Summary T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.

**3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics 26.4**

You can see the following topics related to other function-specific tables:

**Common Account Summary Tables** 

# **27** Mitigants Results Tables

This section provides information about Mitigants Results Tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Mitigants Results T2Ts (Result Tables)
- Deploying Mitigants Results Tables on Hive
- Populating Mitigants Results T2T Result Tables
- Related Topics

Mitigant means to reduce the loss of life and property by reducing the impact of undesirable events.

The purpose of the Mitigants Results table is to store the list of actions to be taken to reduce the impact of undesirable events.

# **27.1** About Mitigants Results T2Ts (Result Tables)

Mitigants Results T2Ts and their description are given here.

Table 283: Mitigants Results T2Ts and their description

T2T Name	T2T Description
T2T_FCT_MITIGANTS	This T2T stores consolidated data of all Mitigants and their details.
T2T_FCT_ACCOUNT_MITIGANT_MAP	This T2T stores account for Mitigant mapping details. This T2T stores more than one Mitigant to be mapped to an account.

The mapping details for the Mitigants Results T2Ts are given here.

Table 284: The mapping details for the Mitigants Results T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_MITIGANTS	Stage Mitigants	FCT_MITIGANTS	Fact Mitigants	T2T_FCT_MITIGANTS
STG_ACCOUNT_ MITIGANT_MAP	Stage Account Mitigant Map	FCT_ACCOUNT_MI TIGANT_MAP	Fact Account Mitigant Map	T2T_FCT_ACCOUNT_M ITIGANT_MAP

# **27.2** Deploying Mitigants Results Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

#### **Populating Mitigants Results T2T Result Tables 27.3**

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **Related Topics 27.4**

You can see the following topics related to other function-specific tables:

**Common Account Summary Tables** 

# 28 Placed Collateral Tables

This section provides information about Placed Collateral Result tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Placed Collateral Dimension Table
- About Placed Collateral T2Ts (Result Tables)
- Deploying Placed Collateral Tables on Hive
- Populating Placed Collateral Dimension Table
- Populating Placed Collateral T2T Result Tables
- Related Topics

Financial Institutions place collateral in derivative transactions, reinsurance issued, or similar use cases where the risk of obligations not being served by reporting entity are perceived high and are secured by seeking agreed collateral in lieu to reduce the risk. Therefore, Placed Collateral refers to the collateral placed by reporting entity to other entities. The Mitigant reflect collateral received and collateral placed functions exactly opposite as of Mitigant.

In Data Foundation, assets hold on books and collateral placed are treated differently. For example, assume a use case where Insurance Company has purchased a lot of Government securities with a market value of 10 Million USD. When they write a reinsurance contract, Insurance Company has sought collateral comprising of government securities worth 4 million USD. In this case, stage investments hold data reflecting 6 million USD, whereas stage placed collateral holds data of 4 million USD.

# 28.1 About Placed Collateral Dimension Table

Placed Collateral Dimension table name and its description are given here.

Table 285: Placed Collateral Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Placed Collateral Dimension	This table stores the details of master collaterals that are placed by the Insurance entity with other Insurance entities in order to secure its borrowings.

The mapping details for the Placed Collateral Dimension table is given here.

Table 286: The mapping details for the Placed Collateral Dimension table

Map Reference	Source Table Name	Logical Stage	Dimension Table	Logical Dimension Table
Number		Table Name	Name	Name
202	STG_PLACED_COLL	Stage Placed	DIM_PLACED_COLL	Placed Collateral
	ATERAL_MASTER	Collateral Master	ATERAL	Dimension

### **About Placed Collateral T2Ts (Result Tables) 28.2**

Placed Collateral T2Ts and their description are given here.

Table 287: Placed Collateral T2Ts and their description

T2T Name	T2T Description
T2T_FCT_PLACED_COLLATERAL	This T2T stores the details of collateral that are placed against an account.
T2T_FCT_ACCT_PLACED_COLL_MAP	This T2T stores account to placed collateral mapping details. It is an intersection table to denote that a placed collateral can be used in multiple accounts and an account contains multiple collaterals.
T2T_FCT_RI_ISSUED_PLCD_COLL_MAP	This T2T stores the mapping between the Placed Collateral and Reinsurance Contract. Reinsurers provide security to Insurance companies to make sure that they are adequately covered.

The mapping details for the Placed Collateral T2Ts are given here.

Table 288: The mapping details for the Placed Collateral T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PLACED_CO LLATERAL	Stage Placed Collateral	FCT_PLACED_COLL ATERAL	Fact Placed Collateral	T2T_FCT_PLACED_COL LATERAL
STG_ACCT_PLAC ED_COLL_MAP	Stage Account Placed Collateral Map	FCT_ACCT_PLACED _COLL_MAP	Fact Account Placed Collateral Map	T2T_FCT_ACCT_PLACE D_COLL_MAP
STG_RI_ISSUED_ PLACED_COLL_M AP	Stage Reinsurance Issued Placed Collateral Map	FCT_RI_ISSUED_PL ACED_COLL_MAP	Fact Reinsurance Issued Placed Collateral Map	T2T_FCT_RI_ISSUED_P LCD_COLL_MAP

#### **Deploying Placed Collateral Tables on Hive 28.3**

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

#### **Populating Placed Collateral Dimension Table 28.4**

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and Check Error Messages.

#### **Populating Placed Collateral T2T Result Tables** 28.5

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **28.6 Related Topics**

You can see the following topics related to other function-specific tables:

Loan Account Summary Tables

### **Transactions and Accounting Tables** 29

This section provides information about Insurance Policy Transactions tables in the Oracle Insurance Data Foundation application.

This consists of primarily two sections. Policy Transactions generated out policy life cycle accounting events and policy commission which are specific to producer or agents business and are generated out of underwriting and some period in the policy life cycle. However, they are not expected to overlap with policy transactions which exclude any producer or agent-specific transactions.

## **Topics:**

- **About Insurance Policy Transactions Dimension Tables**
- About Insurance Policy Transactions T2Ts (Result Tables)
- **Policy Commission Tables**
- Deploying Insurance Policy Transactions Tables on Hive
- Populating Insurance Policy Transactions Dimension Tables
- Populating Insurance Policy Transactions T2T Result Tables
- **Related Topics**

Insurance Policy Transactions are about accounting transactions done for a given policy. They are sourced from respective accounting systems in the Insurance Company.

The purpose of Insurance Policy Transactions tables is to store attributes pertaining to policy transactions related data on an 'as-is' basis received from the source system for further operation reporting. OIDF holds for every product processor or contract table, one transaction table.

#### **About Insurance Policy Transactions Dimension Tables 29.1**

Insurance Policy Transaction Dimension table names and their description are given here.

Table 289: Insurance Policy Transaction Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Policy Transaction Type Dimension	This table stores the details of types of policy transactions.
Premium Offset Method Dimension	This table stores the details about the premium offset method. One option is called Premium Offset Plan or POP. Sample values: AUTOPREMPYMT, LOAN, NETOFFSET, NONE, PARTIAL, and so on.
Premium Suspense Reason Dimension	This table stores the details of Premium Suspense Reason code, and documents the reason behind the premium suspense amount recorded in Premium Suspense Amount.  Sample values: BALDUE, LOANINT, MULTIPLE, PREM, and PREMREFUND.

The mapping details for the Insurance Policy Transaction Dimension tables are given here.

Table 290: The mapping details for the Insurance Policy Transaction Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
693	STG_ANNUITY_TXN S	Stage Annuity Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
694	STG_HEALTH_INS_P OLICY_TXNS	Stage Health Insurance Policy Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
695	STG_LIFE_INS_POLIC Y_TXNS	Stage Life Insurance Policy Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
696	STG_PROP_CASU_P OLICY_TXNS	Stage Property and Casualty Policy Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
697	STG_RETIREMENT_A CCOUNTS_TXNS	Stage Retirement Account Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
698	STG_REINSURANCE_ ISSUED_TXNS	Stage Reinsurance Issued Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
699	STG_REINSURANCE_ HELD_TXNS	Stage Reinsurance Held Transactions	DIM_POLICY_TXN_ TYPE	Policy Transaction Type Dimension
729	STG_PREM_OFFSET_ METHOD_MASTER	Stage Premium Offset Method Master	DIM_PREM_OFFSET _METHOD	Premium Offset Method Dimension
731	STG_PREM_SUSP_RE ASON_MASTER	Stage Premium Suspense Reason Master	DIM_PREM_SUSP_R EASON	Premium Suspense Reason Dimension

# 29.2 About Insurance Policy Transactions T2Ts (Result Tables)

Insurance Policy Transactions T2Ts and their description are given here.

Table 291: Insurance Policy Transactions T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POLICY_TRANSACTIONS_HLD	This T2T stores the reinsurance held transaction details.
T2T_FCT_POLICY_TRANSACTIONS_ISS	This T2T stores the reinsurance issued transaction details.
T2T_FPT_STG_RETIREMENT_ACCOUNTS_ TXNS	This T2T stores retirement accounts transactions.
T2T_FPT_STG_PROP_CASU_POLICY_TXNS	This T2T stores the transaction details for property and casualty policy.
T2T_FPT_STG_LIFE_INS_POLICY	This T2T stores the transaction details for the life insurance policy.

T2T Name	T2T Description
T2T_FPT_STG_HEALTH_INS_TXNS	This T2T stores the transaction details for a health insurance policy.
T2T_FPT_STG_ANNUITY_TXNS	This T2T stores transactions details for annuity contracts.

The mapping details for the Insurance Policy Transactions T2Ts are given here.

Table 292: The mapping details for the Insurance Policy Transactions T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table	T2T Name
STG_REINSURANCE	Stage Reinsurance	FCT_POLICY_TRA	Fact Policy	T2T_FCT_POLICY_TR
_HELD_TXNS	Held Transactions	NSACTIONS	Transactions	ANSACTIONS_HLD
STG_REINSURANCE	Stage Reinsurance	FCT_POLICY_TRA	Fact Policy	T2T_FCT_POLICY_TR
_ISSUED_TXNS	Issued Transactions	NSACTIONS	Transactions	ANSACTIONS_ISS
STG_RETIREMENT_ ACCOUNTS_TXNS	Stage Retirement Accounts Transactions	FCT_POLICY_TRA NSACTIONS	Fact Policy Transactions	T2T_FPT_STG_RETIRE MENT_ACCOUNTS_T XNS
STG_PROP_CASU_P OLICY_TXNS	Stage Property Casualty Policy Transactions	FCT_POLICY_TRA NSACTIONS	Fact Policy Transactions	T2T_FPT_STG_PROP_ CASU_POLICY_TXNS
STG_LIFE_INS_POLI	Stage Life Insurance	FCT_POLICY_TRA	Fact Policy	T2T_FPT_STG_LIFE_I
CY_TXNS	Policy Transactions	NSACTIONS	Transactions	NS_POLICY
STG_HEALTH_INS_ POLICY_TXNS	Stage Health Insurance Policy Transactions	FCT_POLICY_TRA NSACTIONS	Fact Policy Transactions	T2T_FPT_STG_HEALT H_INS_TXNS
STG_ANNUITY_TXN	Stage Annuity	FCT_POLICY_TRA	Fact Policy	T2T_FPT_STG_ANNUI
S	Transactions	NSACTIONS	Transactions	TY_TXNS

# 29.3 Policy Commission Tables

Policy Commission refers to the compensation for the sale of policies to Producers or Agents. This compensation can be a percentage of the premium paid through Agents to Insurance Companies. Many insurance carriers base this commission on several criteria such as Coverage, the product, and the marketing methods. A standard commission is a specific dollar amount or percentage commission on the premium set at the time of or advance of the purchase, renewal, and placement or servicing of a particular insurance policy as applicable. Therefore, Commissions are payable to Producers or agents for bringing the business to the Insurance Company. Here, the Insurance policies cover all types of Insurance Contracts for which services are used.

There are two Policy Commission entities. They are Commission Details and Commission Transactions.

• Stage Policy Commission Details refers to as of date picture of several commission events for a given policy, coverage and commission event type. To arrive at producer or agent level summary one needs to aggregate over given policy for all or specific commission event type. The Source of this information is expected to be an underwriting or producer management systems.

Stage Policy Commission Transactions holds the set of individual transactions incurred or paid for a given policy. The Source of this information is expected to be accounting systems.

#### **About Policy Commission Dimension Tables** 29.3.1

Policy Commission Dimension table names and their description are given here.

Table 293: Policy Commission Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Commission Type Dimension	This table stores the general type or category of the commission details.  Sample values: ADV, COMM, DEBT, DEFCOMM, DEFOVER, ERA, ERAOVRD, and so on.
Commission Basis Type Dimension	This table stores the commission basis type and specifies what rate category is applied to this commission.  Sample values: ANNTYPAYOUTAMT, ASSVAL, ASSVALCHG, COMMPREM, COI, FLAT, FUNDPREM, and so on.
Commission Event Type Dimension	This table stores the commission event type, and the event that triggers generating a commission.  Sample values: ANNIVPOL, CHGSTATUS, APLPREM, SUBMITTED, and so on.
Commission Payment Status Dimension	This table stores the current status of a commission payment details.  Sample values: ACTIVE, CANCELLED, COMPLETE, NOTDONE, HISTORY, PENDING, SUSPENDED, VOID, OTHER, and UNKNOWN.
Commission Transaction Type Dimension	This table stores the Commission transaction type details. Sample values: ADJ, BONUS, CHRGPAYBLE, CHRGEARNED, COMMEARNED, and so on.
Transaction Process Event Type Dimension	This table stores the type of processing this event represents.  Sample values: ORIG, OTHER, REAPPLY, REVERSAL, and UNKNOWN.
Insurance Producer Appointment Dimension	This table stores the Insurance Producer Appointment details.
Commission Option Type Dimension	This table stores the details of the commission option selected for the policy. The commission description, which correlates to the commission code or compensation plan, which the original writing agents choose to be compensated by when the policy was sold.  Sample values: OTHER, UNKNOWN, NOTRL, and so on.

The mapping details for the Policy Commission Dimension tables are given here.

Table 294: The mapping details for the Policy Commission Dimension tables

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
706	STG_COMMISION_T	Stage Commission	DIM_COMMISION_T	Commission Type
	YPE_MASTER	Type Master	YPE	Dimension
707	STG_COMMN_BASI	Stage Commission	DIM_COMMN_BASIS	Commission Basis
	S_TYPE_MASTER	Basis Type Master	_TYPE	Type Dimension
708	STG_COMMN_EVN	Stage Commission	DIM_COMMN_EVNT	Commission Event
	T_TYPE_MASTER	Event Type Master	_TYPE	Type Dimension
709	STG_COMMN_PYM NT_STATUS_MAST ER	Stage Commission Payment Status Master	DIM_COMMN_PYMN T_STATUS	Commission Payment Status Dimension
710	STG_COMMN_TRA NS_TYPE_MASTER	Stage Commission Transaction Type Master	DIM_COMMN_TRAN S_TYPE	Commission Transaction Type Dimension
711	STG_TXN_PROC_EV NT_TYPE_MASTER	Stage Transaction Process Event Type Master	DIM_TXN_PROC_EV NT_TYPE	Transaction Process Event Type Dimension
712	STG_COMMN_OPTI	Stage Commission	DIM_COMMN_OPTIO	Commission Option
	ON_TYPE_MASTER	Option Type Master	N_TYPE	Type Dimension

## 29.3.2 About Policy Commission T2Ts (Result Tables)

Policy Commission T2Ts and their description are given here.

Table 295: Policy Commission T2Ts and their description

T2T Name	T2T Description
T2T_FCT_POLICY_COMMISSION_DETLS	This T2T stores the policy commission details.
T2T_FCT_POLICY_COMMISSION_TXNS	This T2T stores the policy commission transaction details.

The mapping details for the Policy Commission T2Ts are given here.

Table 296: The mapping details for the Policy Commission T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_POLICY_CO MMISSION_DETA ILS	Stage Policy Commission Details	FCT_POLICY_COM MISSION_DETAILS	Fact Policy Commission Details	T2T_FCT_POLICY_COMMI SSION_DETLS
STG_POLICY_CO MMISSION_TXNS	Stage Policy Commission Transactions	FCT_POLICY_COM MISSION_TXNS	Fact Policy Commission Transactions	T2T_FCT_POLICY_COMMI SSION_TXNS

# 29.4 Deploying Insurance Policy Transactions Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.</u>

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 29.5 Populating Insurance Policy Transactions Dimension Tables

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 29.6 Populating Insurance Policy Transactions T2T Result Tables

NOTE

As a prerequisite, ensure to load the DIM\_STD\_TRANSACTION\_TYPE seeded table.

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

**1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:

- a. Prerequisites for loading T2T.
- **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### **Related Topics 29.**7

You can see the following topics related to other function-specific tables:

- **Insurance Contracts Tables**
- **Loan Account Summary Tables**
- **Insurance Claims Tables**

# 30 General Ledger Data and Management Reporting Tables

This section provides information about GL Data and GL to Management Reporting tables in the Data Foundation application.

### **Topics:**

- About GL Data T2T (Result Table)
- About GL to Management Reporting T2T (Result Table)
- About Mapper for GL to Management Reporting Result Table
- Maintaining Mappers for GL to Management Reporting Result Table
- Loading Mapper Maintenance from Backend
- Deploying GL Data and GL to Management Reporting Result Tables on Hive
- Populating GL Data and GL to Management Reporting T2T Result Tables
- Related Topics

A General Ledger is the foundation of a financial system, which is used to store and organize financial data. General Ledgers are used to create the financial statements of a company. A General Ledger account is an account or record used to sort, store, and summarize the transactions of a company. Transactions are posted to individual sub-ledger accounts as defined by the chart of accounts of that company. A Legal Entity in the Insurance institution can maintain the same General Ledger data (either solo or consolidated) in one or more source systems.

In OIDF, Stage GL Data stores summarized data at the primary granularity of General Ledger whereas several transaction tables store the individual transactions. OFSAA suite of applications expect the consolidation of General Ledger data occurring in the financial systems, and OIDF entities are loaded after consolidation.

# **30.1** About GL Data T2T (Result Table)

The purpose of GL Data tables is to keep track of its financial transactions and to prepare financial reports. Each account is a unique record that summarizes each type of asset, liability, equity, revenue, and expense.

GL Data T2T and its description is given here.

Table 297: GL Data T2T and its description

T2T Name	T2T Description
T2T_FCT_GL_DATA	This table stores the transactional Data for GL Repline Code.

The mapping details for the GL Data T2T is given here.

Table 298: The mapping details for the GL Data T2T

Source Table	Logical Stage	Target Table	Logical Fact	T2T Definition Name
Name	Table Name	Name	Table Name	
STG_GL_DATA	Stage General Ledger Data	FCT_GL_DATA	Fact General Ledger Data	T2T_FCT_GL_DATA

#### **About GL to Management Reporting T2T (Result Table)** 30.2

The purpose of GL to Management Reporting tables is to provide a detailed description of every general ledger account and the transactions that make up the balance in that account. The general ledger holds all the financial information used to create the income statement and balance sheet reports and serves several main purposes in the financial operation of the business.

GL to Management Reporting T2T and its description is given here.

Table 299: GL to Management Reporting T2T and its description

T2T Name	T2T Description
T2T_FCT_MGMT_REPORTING_STG_GL_D ATA	This T2T stores management reporting data related to organization and product profitability, income statement, and balance sheet.

The mapping details for the GL to Management Reporting T2T is given here.

Table 300: The mapping details for the GL to Management Reporting T2T

Source Table Name	Mapper Table Name	Target Table Name	T2T Definition Name
STG_GL_DAT	MAP_GL_CODE_REP_L	FCT_MGMT_REPORTIN G	T2T_FCT_MGMT_REPORTING_STG_GL
A	INE		_DATA

## **About Mapper for GL to Management Reporting Result** 30.3 **Table**

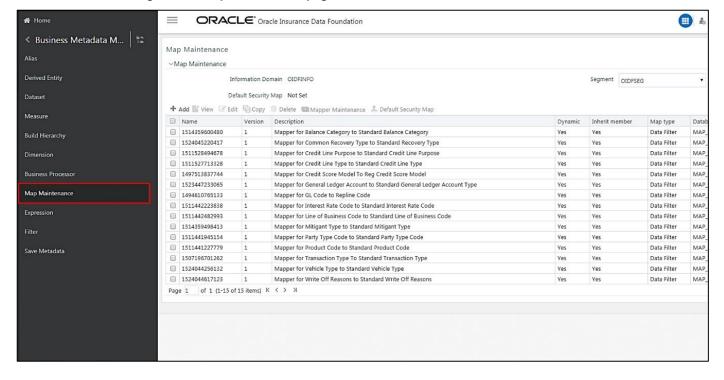
The Fact Management Reporting table uses reporting line codes, which are OFSAA specific values that represent each line item of reporting requirements. On the other hand, the Stage GL Data table uses the General Ledger Codes. These General Ledger Codes are user-specific values that represent each General Ledger Code of the user data records. Map GL Codes to Reporting Line Codes and then load the Fact Management Reporting target table. You can maintain these mappings through the Map Maintenance component of OFSAAI.

# 30.4 Maintaining Mappers for GL to Management Reporting Result Table

To maintain Mappers through the Map Maintenance component of OFSAAI:

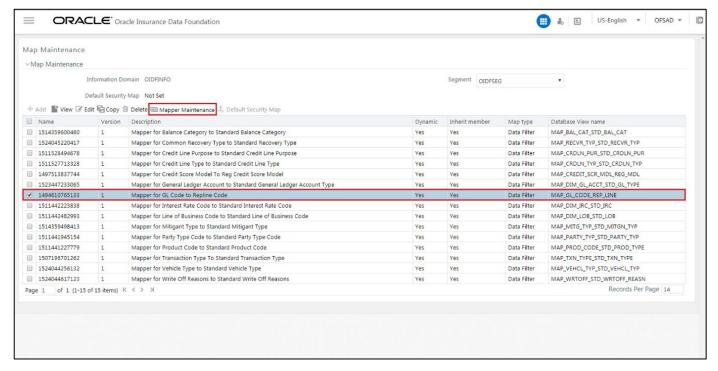
- 1. From OFSAA Home, select Oracle Insurance Data Foundation, select Unified Analytical Metadata, select Business Metadata Management, and then select Map Maintenance.
- 2. The Map Maintenance page is displayed.

Figure 101: Map Maintenance page



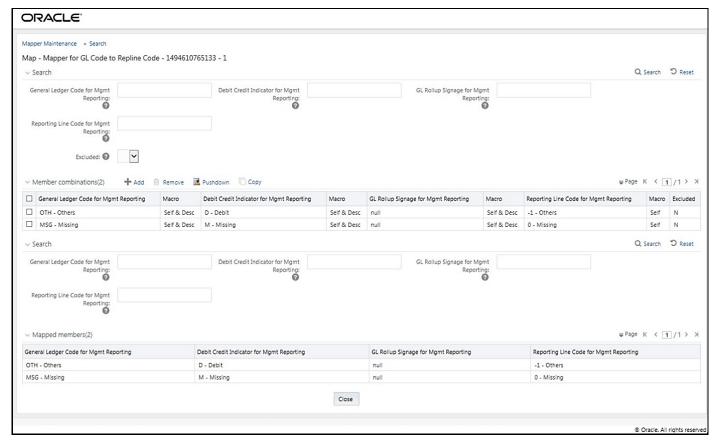
3. Select the mapper record Mapper for GL Code to Repline Code and then click the Mapper Maintenance icon.

Figure 102: Select the required Mapper



4. The Mapper Maintenance page is displayed. The GL Codes OTH and MSG are out-of-the-box mappings. You can maintain the remaining mappings according to the user-specific values.

Figure 103: Mapper Maintenance page



#### **Topics:**

- Prerequisites for Mapper Maintenance
- **Possible Mapping Combinations**
- Performing Multiple Sets of Mapping Combinations

#### **Prerequisites for Mapper Maintenance** 30.4.1

Perform these prerequisite steps for maintaining Mappers:

- 1. Through the SCD process, load the GL Dimension table.
- **2.** In the Metadata Resave section, resave these hierarchies:
  - HMGMT001 General Ledger Code for Mgmt Reporting
  - HMGMT002 Debit Credit Indicator for Mgmt Reporting
  - HMGMT003 GL Rollup Signage for Mgmt Reporting
  - HMGMT004 Reporting Line Code for Mgmt Reporting

# **30.4.2** Possible Mapping Combinations

These are the four types of mapping combinations:

- Mapping Combinations at Child Hierarchy Level
- Mapping Combinations at Parent and Child Hierarchy Level
- Mapping Combinations at Parent Hierarchy Level without Descendants
- Mapping Combinations at Parent Hierarchy Level by Removing one or more Descendants

## 30.4.2.1 Mapping Combinations at Child Hierarchy Level

The mapping combinations for the General Ledger Code for Mgmt Reporting hierarchy at child member level (individual nodes) are:

- One-to-One mapping with or without Debit Credit Indicator.
- Many-to-One mapping with or without Debit Credit Indicator.
- Many-to-Many mapping with or without Debit Credit Indicator.

The procedures for mapping combinations are as follows.

### 30.4.2.1.1 One-to-One mapping with or without Debit Credit Indicator

To map one GL Code to one Reporting Line Code, use the Mapper Maintenance utility. In this utility, select one member in the General Ledger Code for the Mgmt Reporting hierarchy, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one member in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table for the selected GL Code loads into the Fact Management Reporting table.

#### **NOTE**

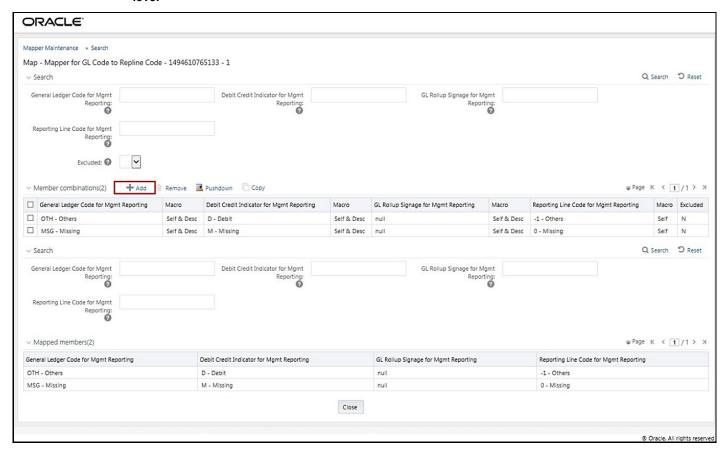
The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform One-to-One mapping with or without Debit Credit Indicator, follow these steps:

1. In the Mapper Maintenance page, in the Member combinations section, click Add.

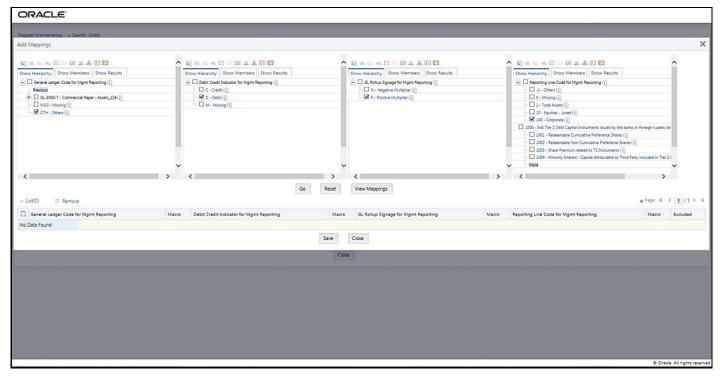
Figure 104: Select Add in the Mapper Maintenance page for the One-to-One mapping at child hierarchy level



2. The Add Mappings page is displayed. For illustration, select the member of the General Ledger Code for Mgmt Reporting hierarchy OTH - Others, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy **D** - **Debit** to map to the member of the Reporting Line Code for Mgmt

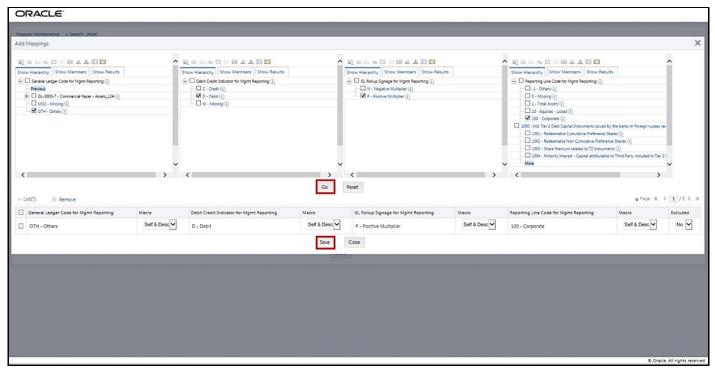
Reporting hierarchy 100 - Corporate with the member of the GL Rollup Signage for Mgmt Reporting hierarchy **P - Positive Multiplier**.

Figure 105: Add Mappings page for the One-to-One mapping at child hierarchy level



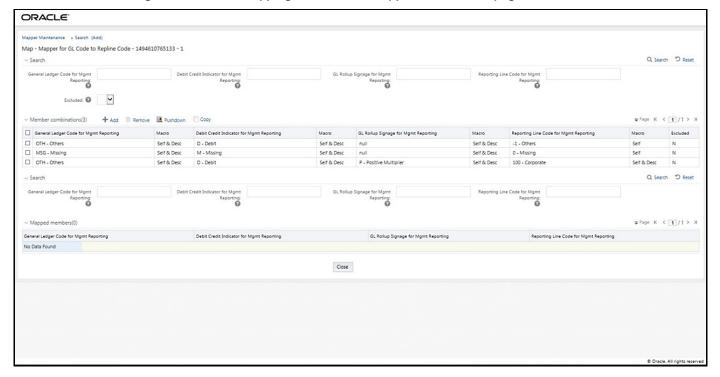
To map the members, click **Go**. The list of mapped members is displayed at the bottom. To save the mappings, click **Save**.

Figure 106: Map the members and save the mappings



- 4. An acknowledgment pop-up message appears. To confirm saving the mapping, click Yes.
- The mapped member combinations are listed in the **Mapper Maintenance** page.

Figure 107: Added mappings listed in the Mapper Maintenance page



#### Many-to-One mapping with or without Debit Credit Indicator 30.4.2.1.2

To map multiple GL Codes to one Reporting Line Code, use the Mapper Maintenance utility. In this utility, select two or more members in the General Ledger Code for the Mgmt Reporting hierarchy, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one member in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected GL Codes, are aggregated and then loaded into the Fact Management Reporting table.

#### **NOTE**

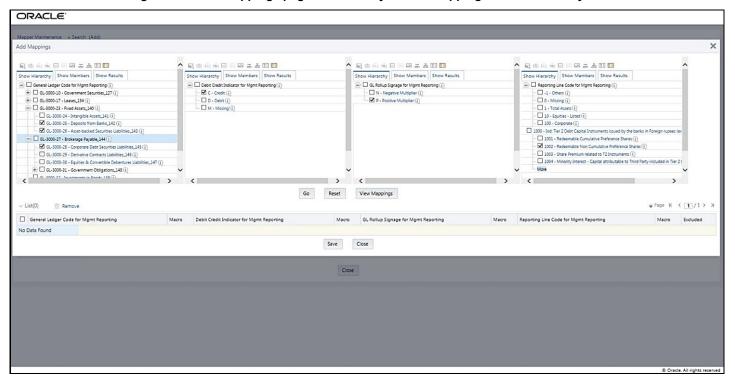
In the T2T process, in the Stage GL Data table, the GL Code aggregation takes place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform Many-to-One mapping with or without Debit Credit Indicator, follow these steps:

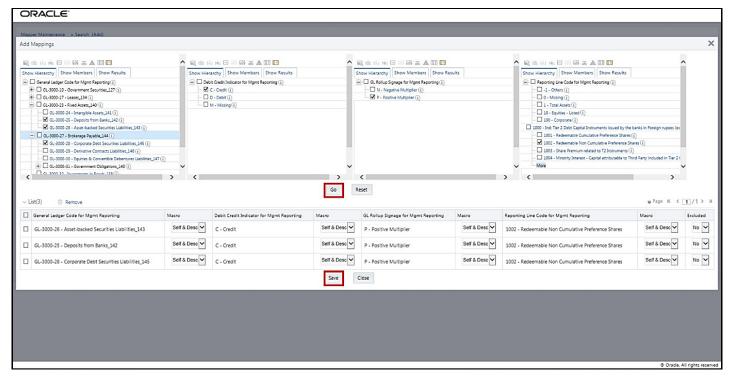
- 1. In the Mapper Maintenance page, in the Member combinations section, click Add.
- 2. The Add Mappings page is displayed. For illustration, select the child members of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-26 – Asset-backed Securities Liabilities\_143 and GL-3000-28 - Corporate Debt Securities Liabilities\_145, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy, C - Credit to map to the Reporting Line Code hierarchy member 1002 - Redeemable Non-Cumulative Preference Shares with the GL Rollup Signage hierarchy member P - Positive Multiplier.

Figure 108: Add Mappings page for the Many-to-One mapping at child hierarchy level



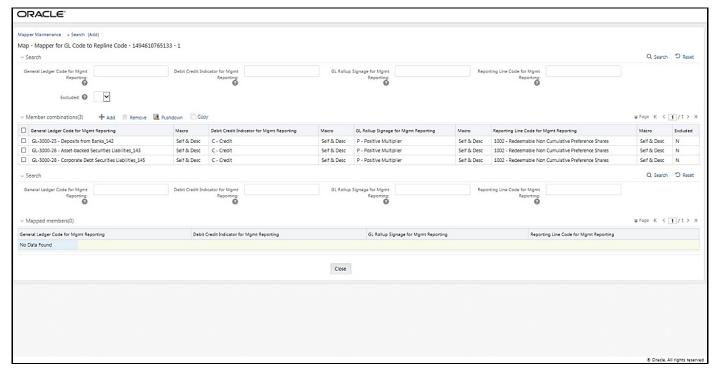
**3.** To map the members, click **Go**. The list of mapped members appears at the bottom. To save the mappings, click **Save**.

Figure 109: Map the members and save the mappings



- 4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.
- **5.** The mapped member combinations are listed in the **Mapper Maintenance** page.

Figure 110: Added mappings listed in the Mapper Maintenance page



#### Many-to-Many mapping with or without Debit Credit Indicator 30.4.2.1.3

To map multiple GL Codes to multiple Reporting Line Codes, use the Mapper Maintenance utility. In this utility, select two or more members in the General Ledger Code for the Mgmt Reporting hierarchy, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select two or more members in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected GL Codes, are aggregated and then loaded into the Fact Management Reporting table.

#### NOTE

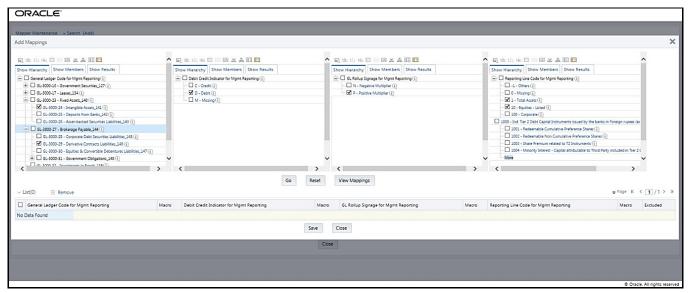
In the T2T process, in the Stage GL Data table, the GL Code aggregation takes place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform Many-to-Many mapping with or without Debit Credit Indicator, follow these steps:

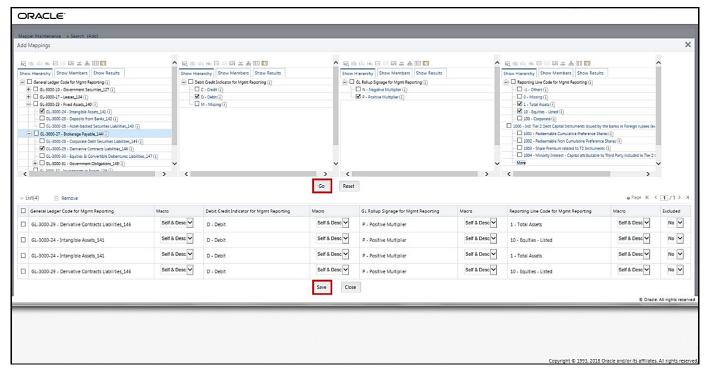
- 1. In the Mapper Maintenance page, in the Member combinations section, click Add.
- The **Add Mappings** page is displayed. For illustration, select the child members of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-24 – Intangible Assets\_141 and GL-3000-29 – Derivative Contracts Liabilities\_145, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy, D - Debit to map to the child members of the Reporting Line Code for Mgmt Reporting hierarchy, 1 - Total Assets and 10 - Equities Listed with the member of the GL Rollup Signage for Mgmt Reporting hierarchy, P - Positive Multiplier.

Figure 111: Add Mappings page for the Many-to-Many mapping at child hierarchy level



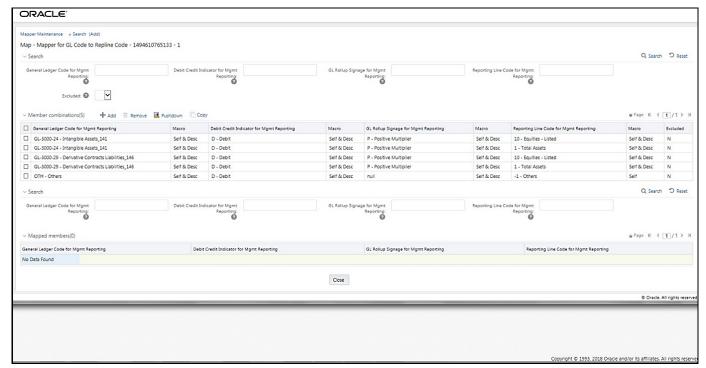
**3.** To map the members, click **Go**. The list of mapped members appears at the bottom. To save the mappings, click **Save**.

Figure 112: Map the members and save the mappings



- 4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.
- 5. The mapped member combinations are listed in the **Mapper Maintenance** page.

Figure 113: Added mappings listed in the Mapper Maintenance page



## 30.4.2.2 Mapping Combinations at Parent and Child Hierarchy Level

The mapping combinations for the General Ledger Code for Mgmt Reporting hierarchy maintained as Parent-Child hierarchy are:

- One Parent to One Reporting Line Code mapping with or without Debit Credit Indicator.
- Many Parents to One Reporting Line Code mapping with or without Debit Credit Indicator.
- Many Parents to Many Reporting Line Codes mapping with or without Debit Credit Indicator.

The procedures for mapping combinations as Parent-Child hierarchy are as follows.

## 30.4.2.2.1 One Parent to One Reporting Line Code mapping with or without Debit Credit Indicator

To map one parent GL Code to one Reporting Line Code, use the Mapper Maintenance utility. In this utility, select one parent GL Code, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one member in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected parent GL Codes and their descendants, are aggregated and then loaded into the Fact Management Reporting table.

#### **NOTE**

In the T2T process, in the Stage GL Data table, the aggregation of parent GL Codes and their descendants take place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit
- The value must be C when you map the GL Code to the Credit member.

To perform One Parent to One Reporting Line Code mapping with or without Debit Credit Indicator, follow these steps:

- 1. In the **Mapper Maintenance** page, in the Member combinations section, click **Add**.
- 2. The Add Mappings page is displayed. For illustration, select one parent member of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-23 – Fixed Assets\_140 and its child member GL-3000-24 - Intangible Assets\_141, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy C - Credit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 1003 – Share Premium related to T2 Instruments with the member of the GL Rollup Signage for Mgmt Reporting hierarchy N - Negative Multiplier.

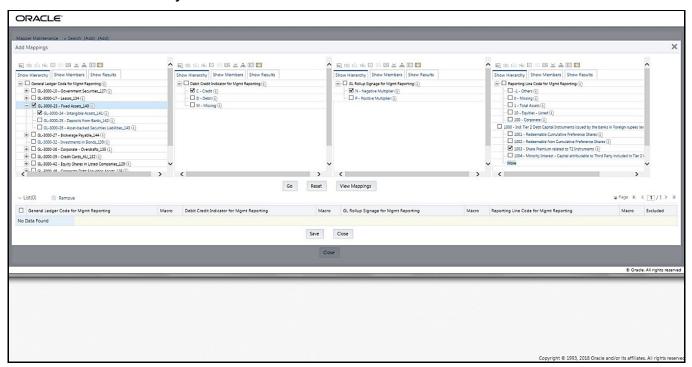
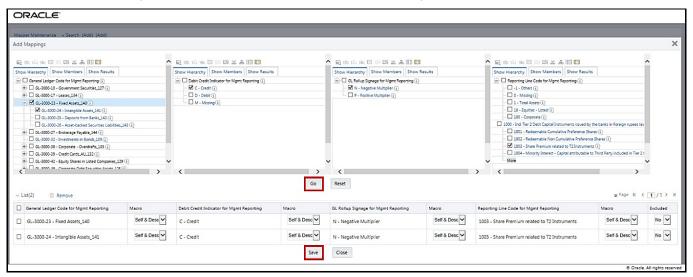


Figure 114: Add Mappings page for the one parent to one Reporting Line Code mapping at parent and child hierarchy level

**3.** To map the members, click **Go**. The list of mapped members appears at the bottom. To save the mappings, click **Save**.

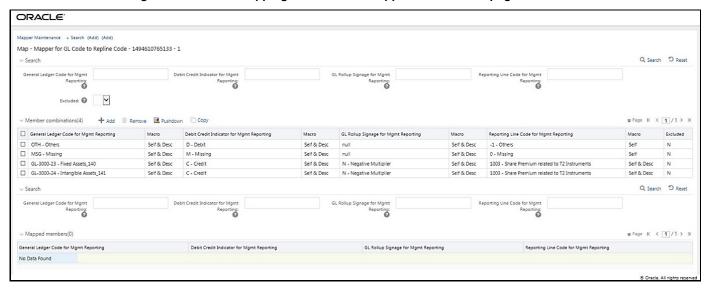
Figure 115: Map the members and save the mappings



4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.

The mapped member combinations are listed in the Mapper Maintenance page.

Figure 116: Added mappings listed in the Mapper Maintenance page



#### 30.4.2.2.2 Many Parents to One Reporting Line Code with or without Debit Credit Indicator

To map multiple parent GL Codes to one Reporting Line Code, use the Mapper Maintenance utility. In this utility, select two or more parent GL Codes, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one member in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected parent GL Codes and their descendants, are aggregated and then loaded into the Fact Management Reporting table.

#### **NOTE**

In the T2T process, in the Stage GL Data table, the aggregation of parent GL Codes and their descendants take place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

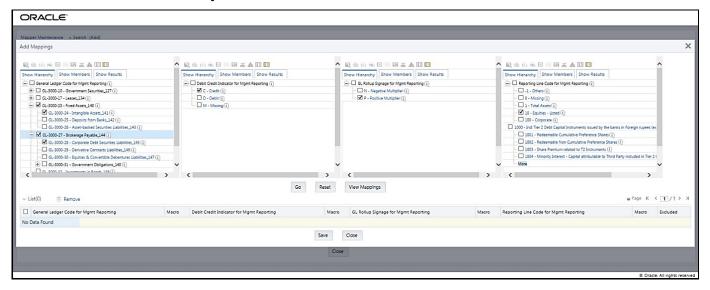
- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform Many Parents to One Reporting Line Code mapping with or without Debit Credit Indicator, follow these steps:

- 1. In the **Mapper Maintenance** page, in the Member combinations section, click **Add**.
- 2. The Add Mappings page is displayed. For illustration, select parent members of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-23 Fixed Assets\_140 and GL-3000-27 Brokerage Payable\_144, and their child members GL-3000-24 Intangible Assets\_141 and GL-3000-28 –

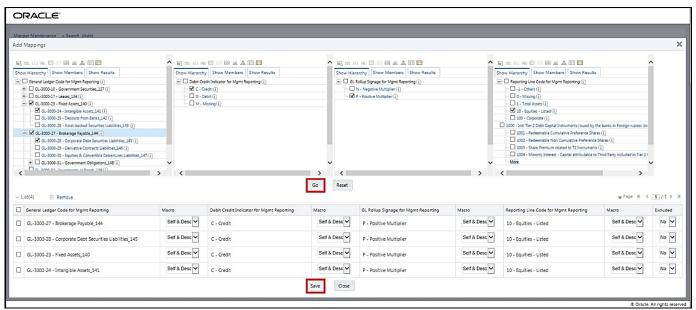
Corporate Debt Securities Liabilities\_145 respectively, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy C - Credit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 10 – Equities - Listed with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P - Positive Multiplier.

Figure 117: Add Mappings page for the many parents to one Reporting Line Code mapping at parent and child hierarchy level



3. To map the members, click **Go**. The list of mapped members appears at the bottom. To save the mappings, click Save.

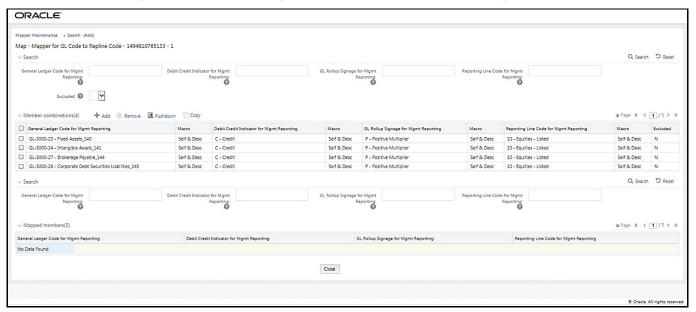
Figure 118: Map the members and save the mappings



4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.

5. The mapped member combinations are listed in the **Mapper Maintenance** page.

Figure 119: Added mappings listed in the Mapper Maintenance page



#### Many Parents to Many Reporting Line Codes with or without Debit Credit Indicator 30.4.2.2.3

To map multiple parent GL Codes to multiple Reporting Line Codes, use the Mapper Maintenance utility. In this utility, select two or more parent GL Codes, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select two or more members in the Reporting Line Code hierarchy. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected parent GL Codes and their descendants, are aggregated and then loaded into the Fact Management Reporting table.

#### **NOTE**

In the T2T process, in the Stage GL Data table, the aggregation of parent GL Codes and their descendants take place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

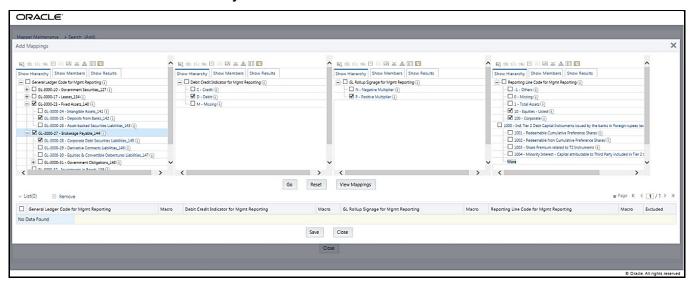
- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform Many Parents to Many Reporting Line Codes mapping with or without Debit Credit Indicator, follow these steps:

- 1. In the **Mapper Maintenance** page, in the Member combinations section, click **Add**.
- The **Add Mappings** page is displayed. For illustration, select parent members of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-23 – Fixed Assets\_140 and GL-3000-27 – Brokerage

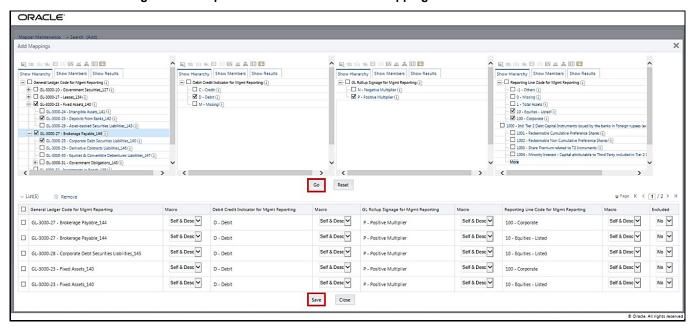
Payable\_144, and their child members GL-3000-24 – Intangible Assets\_141 and GL-3000-28 – Corporate Debt Securities Liabilities\_145 respectively, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy C - Credit to map to the members of the Reporting Line Code for Mgmt Reporting hierarchy 10 – Equities - Listed and 100 – Corporate with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P - Positive Multiplier.

Figure 120: Add Mappings page for the many parents to many Reporting Line Codes mapping at parent and child hierarchy level



**3.** To map the members, click **Go**. The list of mapped members appears at the bottom. To save the mappings, click **Save**.

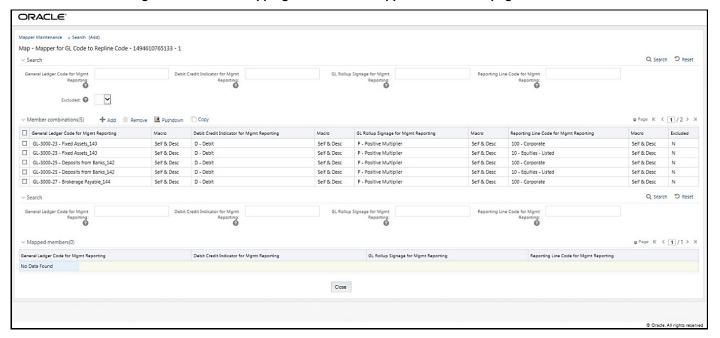
Figure 121: Map the members and save the mappings



4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.

5. The mapped member combinations are listed in the **Mapper Maintenance** page.

Figure 122: Added mappings listed in the Mapper Maintenance page



#### Mapping Combinations at Parent Hierarchy Level without Descendants 30.4.2.3

This section explains the mapping combinations for the General Ledger Code for the Mgmt Reporting hierarchy at Parent level hierarchy without Descendants (child members).

To map one parent GL Code without Descendants to one or more Reporting Line Codes, use the Mapper Maintenance utility. In this utility, select one parent GL Code, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one or more members in the Reporting Line Code hierarchy. Then for the GL hierarchy, select Self in the Macro column. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected parent GL Code, is aggregated and then loaded into the Fact Management Reporting table.

#### NOTE

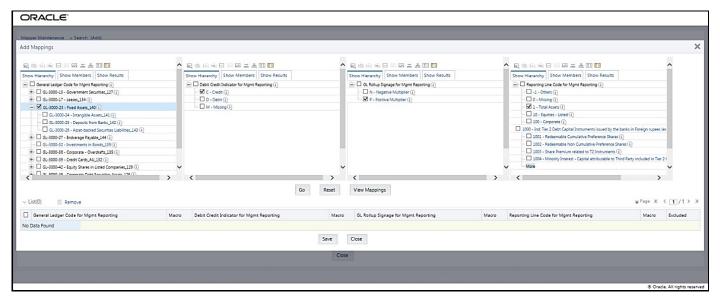
In the T2T process, in the Stage GL Data table, the aggregation of parent GL Code takes place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform One Parent to One or Many Reporting Line Codes mappings without Descendants, follow these steps:

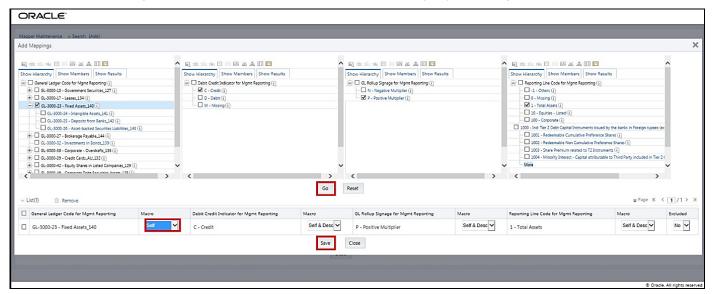
- In the Mapper Maintenance page, in the Member combinations section, click Add.
- 2. The **Add Mappings** page is displayed. For illustration, select one parent member of the General Ledger Code for Mgmt Reporting hierarchy GL-3000-23 Fixed Assets\_140, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy C Credit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 1 Total Assets with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P Positive Multiplier.

Figure 123: Add Mappings page for the one parent to one or many Reporting Line Codes mapping without Descendants



To map the members, click Go. The list of mapped members appears at the bottom. To exclude the
Descendants of the GL Code from the mapping, in the Macro column, select Self. To save the
mappings, click Save.

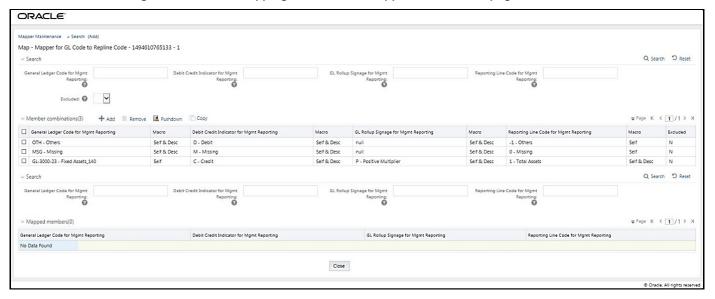
Figure 124: Map the members and save the mappings by excluding Descendants



4. An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.

**5.** The mapped member combinations are listed in the **Mapper Maintenance** page with the Macro value of GL Code as Self.

Figure 125: Added mappings listed in the Mapper Maintenance page



# 30.4.2.4 Mapping Combinations at Parent Hierarchy Level by Removing one or more Descendants

This section explains the mapping combinations for the General Ledger Code for the Mgmt Reporting hierarchy at Parent level hierarchy by removing one or more Descendants (child members).

To map one parent GL Code to one or more Reporting Line Codes by removing one or more Descendants, use the Mapper Maintenance utility. In this utility, select one parent GL Code with one or more Descendants, select one member in the Debit Credit Indicator hierarchy with the value Debit or Credit or Missing, and select one or more members in the Reporting Line Code hierarchy. Then for the GL hierarchy, in the Macro column, select Self & Descendants, and in the Excluded column, select either Yes to exclude or No to include the Descendants from mapping. As a result, during the T2T process, the corresponding data from the Stage GL Data table, for the selected parent GL Code and its descendants, is aggregated and then loaded into the Fact Management Reporting table.

#### NOTE

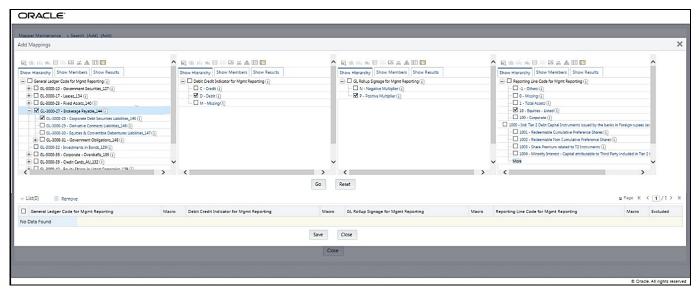
In the T2T process, in the Stage GL Data table, the aggregation of parent GL Code and its descendants take place in all the Measure columns that are associated with the Primary Keys. The conditions for the Debit Credit Indicator column values in the Stage GL Data table are:

- The value must be M when you map the GL Code to the Missing (MSG) member. If nothing is mapped, the system automatically sets the value to M.
- The value must be D when you map the GL Code to the Debit member.
- The value must be C when you map the GL Code to the Credit member.

To perform One Parent to One or Many Reporting Line Codes mapping by removing one or more GL Code Descendants:

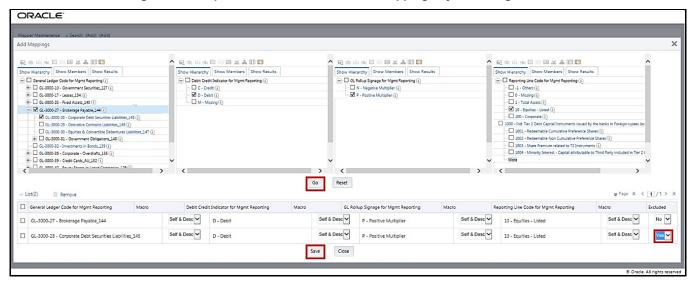
- In the Mapper Maintenance page, in the Member combinations section, click Add.
- 2. The **Add Mappings** page is displayed. For illustration, select one parent member of the General Ledger Code for Mgmt Reporting hierarchy GL-3000-27 Brokerage Payable\_144 and its child member (Descendant) GL-3000-28 Corporate Debt Securities Liabilities\_145, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy D Debit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 10 Equities Listed with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P Positive Multiplier.

Figure 126: Add Mappings page for the mapping combinations at parent hierarchy level by removing one or more Descendants



**3.** To map the members, click **Go**. The list of mapped members appears at the bottom. To exclude the Descendant of the GL Code from the mapping, in the Macro column, select Self & Descendants, and in the Excluded column, select **Yes**. To save the mappings, click **Save**.

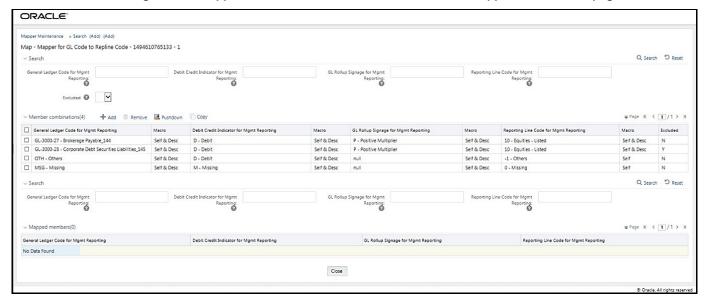
Figure 127: Map the members and save the mappings by excluding Descendants



4. An acknowledgment pop-up message is displayed. To confirm saving the mappings, click Yes.

5. The mapped member combinations are listed in the **Mapper Maintenance** page with the Macro value of GL Code as Self.

Figure 128: Mapped member combinations are listed in the Mapper Maintenance page



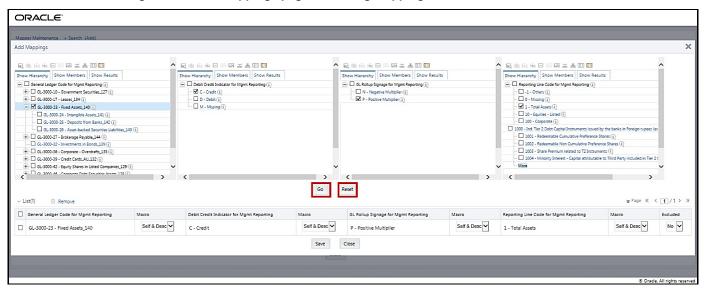
#### **Performing Multiple Sets of Mapping Combinations** 30.4.3

To perform mapping more than one time in the **Add Mappings** page, use the **Reset** functionality. To perform this procedure:

- 1. In the Mapper Maintenance page, in the Member combinations section, click Add.
- The **Add Mappings** page is displayed. For illustration, select one parent member of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-23 - Fixed Assets\_140, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy C - Credit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 1 – Total Assets with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P - Positive Multiplier. To map the members, click Go.

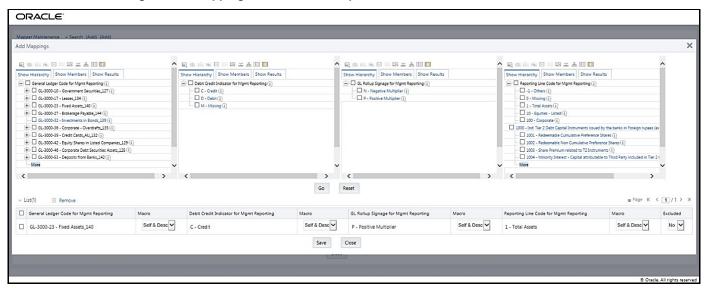
The list of mapped members appears at the bottom. To initiate mapping of another set of member combinations, click **Reset**.

Figure 129: Add Mappings page for adding mappings for the first set of members and select Reset



The mapping selections clear.

Figure 130: Mapping selections clear up



4. For illustration, selected a parent member of the General Ledger Code for Mgmt Reporting hierarchy, GL-3000-27 – Brokerage Payable\_144, and the member of the Debit Credit Indicator for Mgmt Reporting hierarchy D - Debit to map to the member of the Reporting Line Code for Mgmt Reporting hierarchy 10 – Equities - Listed with the member of the GL Rollup Signage for Mgmt Reporting hierarchy P - Positive Multiplier. To map this set of member combinations, click Go. To save the mappings, click Save.

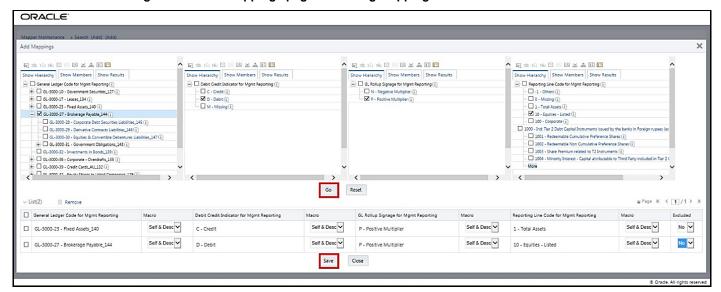
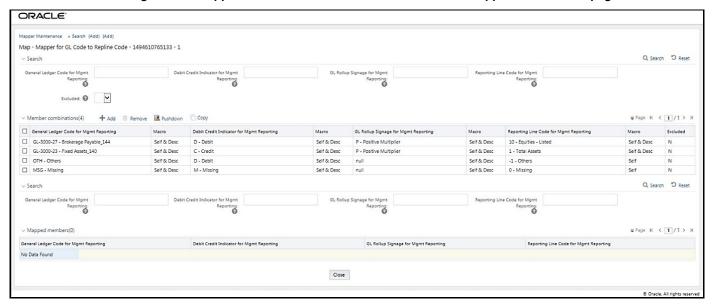


Figure 131: Add Mappings page for adding mappings for the next set of members

- An acknowledgment pop-up message appears. To confirm saving the mappings, click Yes.
- Both set of mapped member combinations are listed on the **Mapper Maintenance** page.

Figure 132: Mapped member combinations are listed in the Mapper Maintenance page

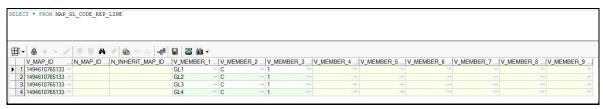


#### **Loading Mapper Maintenance from Backend** 30.5

In this illustration, load the MAP\_GL\_CODE\_REP\_LINE table in the Atomic schema with the V\_MAP\_ID value as 194610765133, and load these column values:

- V\_MEMBER\_1 = GL Code (values from DIM\_GL\_ACCOUNT.V\_GL\_ACCOUNT\_CODE).
- V\_MEMBER\_2 = Debit Credit Indicator (values must be C or D or M).
- V\_MEMBER\_3 = Reporting Line Code (values from DIM\_REP\_LINE.N\_REP\_LINE\_CD).

Figure 133: Loading the Mapper Maintenance from backend



**NOTE** 

These values are real business key columns and not display codes.

### **Deploying GL Data and GL to Management Reporting** 30.6 **Result Tables on Hive**

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

### Populating GL Data and GL to Management Reporting **30.**7 **T2T Result Tables**

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics** 30.8

You can see the following topics related to other function-specific tables:

- **Insurance Contracts Tables**
- Insurance Claims Tables
- **Transaction Summary Tables**

# 31 Insurance Claims Tables

This chapter details the Insurance Claims tables in the Oracle Insurance Data Foundation application.

### **Topics:**

- About Insurance Claims
- About Insurance Claims Dimension Tables
- About Insurance Claims T2Ts (Result Tables)
- Deploying Insurance Claims Tables on Hive
- Populating Insurance Claims Dimension Tables
- Populating Insurance Claims T2Ts (Result Tables)
- Related Topics

## 31.1 About Insurance Claims

An insurance claim is a formal request to an Insurance Company for coverage or compensation for a covered loss or policy event. The Insurance Company validates the claim and, after approval, issues payment to the insured or to an approved interested Party on behalf of the insured.

The OIDF application sources data from the claim systems after the claim is generated.

The Claims tables store the claim process performed to date including the claim dates, status, and amounts.

The following table depicts the difference between the Statutory Insurance and the Non-statutory Insurance:

Table 301: Difference between the Statutory Insurance and the Non-statutory Insurance

Statutory Insurance	Non-statutory Insurance
This is a type of insurance, which the insured is required to buy under a country, state, or federal law.	This is a type of insurance, which is up to the buyer to purchase or not.

## 31.1.1 An Illustration of the Insurance Claims Process Flow

This section contains an illustration of the Insurance Claims process flow in chronological order.

This is an example of the Insurance Claims process after the fire occurrence in a technology park.

Assume that, in a Tier I city, in a technology park, in a company building of four floors, there is a fire incident on the second floor. Due to the extent of the fire, the building has collapsed into its underground parking area. As a result, there are damages and destruction caused to the equipment and furniture inside the building, a few injured people, and a few fire-related deaths. In addition, the vehicles inside the building parking area are damaged or destroyed. During the building collapse, the adjacent building is damaged. As the collapsed building, the adjacent damaged building, and the technology park are insured, they apply for the Insurance Claim for recovery.

The Insurance Company checks their reserve and the details of the Insured. The Insurance Company Assessor is sent to the collapsed building location to assess the extent of damage and destruction in detail. The Assessor analyzes the fire incident location, the injured, and the deceased lives. Then the Assessor creates a detailed report, which also includes the damage due to the water used to put out the fire and the disabilities caused. The Assessor cross-verifies the report with the Insurance Policy terms. All these damages, destructions, and loss of lives are caused due to one fire incident. For an incidence to be an occurrence, there must be common traits across multiple claims, same date, same location, and then the traits are grouped together for future use. The insurer can set aside a calculated amount of money for a similar incidence that can occur the next time.

Even though the Insurance Company focuses on completing the claims process on time, there can be possible flaws in the process due to human error or undiscovered reasons. For example, the Nominee is not the Beneficiary, or an employee was not even in the incident premises, however, that employee was hurt outside due to some other reason and is claimed as injured by the insured company, and so on.

Based on the assessment of the policy terms, report, and claim terms, the claim is processed or rejected.

#### **Insurance Claims Process Flow** 31.1.2

This is the representation of the conceptual model of Insurance Policy Claims.

Conceptual Model of Policy Claims **Claim Preliminary** Claim Management **Evaluation Source System** Claim Details Claim Party Map Registering Claim ID and other details Claim Breakup and Claim Occurrence Estimation Claim Details **Claim Investigation** Claim Status, Settlement, Reinsurance Recoverable **Claim Transactions** 

Figure 134: The representation of the conceptual model of Insurance Policy Claims

The process flow of an Insurance Policy Claim is as follows:

- A Claim is created and the data is stored in the Claim Dimension table.
- 2. The claim policy map is used to store the relationship between the claim and the policy for which it is created. The mapping details are stored in the Claim Party Map table.
- 3. The details of a claim from the policyholder, the amount paid by the insurer, and the summary of the claim's transactions to date are stored in the Claim Details table.

- **4.** The insurer must conduct the claim investigation. The insurer obtains information to evaluate an insurance claim. The investigators look for evidence whether a claim is legitimate or illegitimate. The investigation details are stored in the Claim Investigation Details table.
- **5.** After the claim investigation is complete, the claim amount is estimated and the claim breakup is done. The claim breakup is where an insurer sets aside a claim amount for a policy.
- **6.** The transactions related to a claim are stored in the Claims Transactions table.

NOTE

The Claim Identifier column is added to the tables FCT\_PARTY\_MEDICAL\_CONDITN\_DTLS, FCT\_PARTY\_MEDICAL\_TREATMENTS, and FCT\_PARTY\_DISABILITY\_DETAILS to link the party medical attributes to the insurance claims.

# 31.2 About Insurance Claims Dimension Tables

This section provides mapping details and descriptions of the Insurance Claims Dimension tables.

## 31.2.1 About Insurance Claim Details Dimension Tables

The Insurance Claims Details Dimension table names and their description are as follows.

Table 302: The Insurance Claims Details Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Dimension Claim Status	Stores the list of all status codes and descriptions that are applicable for a claim transaction.
Claim Dimension	Stores the list of all claims.
Catastrophe Events Dimension	Stores the catastrophic event details for a claim.
Claim Feature Status Dimension	Stores the status of a claim, based on which several calculations change.
Premium Plan Type Dimension	Stores the premium plan type details. Sample values: AUDIT and EST.
Claim Offer Dimension	Stores details of the offer given on a claim.
Claim Risk Category Dimension	Stores the category details of the claim risk. This table is used to specify the situations, where the claim risk category may be based on several criteria such as the claim amount, the manner of loss, length of the time policy is in force, contestability or other investigative issues, and many other factors.  Sample values: OTHER, UNKNOWN, HIGH, LOW, and MEDIUM.
Claim Status Reason Dimension	Stores details of the claim status reason. This table provides additional details about the reason for the current claim status. Sample values: ACTIVEREVIEW, ADDINVEST, BACKPROC, INVALIDBENE, LITIGATION, RECOVERED, and so on.

Logical Dimension Table Name	Dimension Table Description
Claim Type Dimension	Stores details of the types of claims types. Sample values: DEATH, DISMEMBERMENT, DISABILITY, ILLNESS, and UNEMPLOYMENT.
International Statistical Classification Of Diseases Dimension	Stores classification details of the international statistics of diseases. The ICD is the International Statistical Classification of Diseases and Related Health Problems. The ICD is a medical classification list maintained by the World Health Organization (WHO). The list contains codes for diseases, signs, and symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or diseases.

The mapping details for the Insurance Claims Details Dimension tables are as follows.

Table 303: The mapping details for the Insurance Claims Details Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
234	STG_CLAIM_STAT US_MASTER	Stage Claim Status Master	DIM_CLAIM_STAT US	Dimension Claim Status
239	STG_CLAIM_DETAI	Stage Claim Details	DIM_CLAIM	Claim Dimension
241	STG_CATASTROP HE_EVENTS_MAST ER	Stage Catastrophe Events Master	DIM_CATASTROP HE_EVENTS	Catastrophe Events Dimension
605	STG_CLAIM_FEAT URE_STTS_MASTE R	Stage Claim Feature Status Master	DIM_CLAIM_FEAT URE_STATUS	Claim Feature Status Dimension
784	STG_PREM_PLAN_ TYPE_MASTER	Stage Premium Plan Type Master	DIM_PREM_PLAN_ TYPE	Premium Plan Type Dimension
792	STG_CLAIM_OFFE R_MASTER	Stage Claim Offer Master	DIM_CLAIM_OFFE R	Claim Offer Dimension
793	STG_CLAIM_RISK_ CATEGORY_MAST ER	Stage Claim Risk Category Master	DIM_CLAIM_RISK_ CATEGORY	Claim Risk Category Dimension
794	STG_CLAIM_STAT US_REASON_MAS TER	Stage Claim Status Reason Master	DIM_CLAIM_STAT US_REASON	Claim Status Reason Dimension
795	STG_CLAIM_TYPE _MASTER	Stage Claim Type Master	DIM_CLAIM_TYPE	Claim Type Dimension
812	STG_INT_CLSFCTN _DISEASE_MASTE R	Stage International Statistical Classification Of Diseases Master	DIM_INT_CLASSIFI CTION_DISEASES	International Statistical Classification Of Diseases Dimension

# 31.2.2 About Insurance Claims Investigation Dimension Tables

The Insurance Claims Investigation Dimension table names and their description are as follows.

Table 304: The Insurance Claims Investigation Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Claim Investigation Dimension	Stores the Claim Investigation details. The claims investigation is a process in which the insurance companies, insurance examiners, or investigators obtain information to evaluate an insurance claim. The investigators look for evidence whether a claim is legitimate or illegitimate.
Investigation Status Reason Dimension	Stores details of the Investigation Status Reason. Sample values: IDF, NAIC1, NAIC2, PKEY1, PKEY2, POL1, SYSU, UREQ, and so on.
Claim Investigation Reason Dimension	Stores details of the claim investigation reason. This table is used to identify the aspect of the claim that leads the submitter to doubt the validity of a claim and refer the claim for further investigation. The source of this code list is the National Insurance Crime Bureau (NICB).  Sample values: FL and SFL.
Claim Review Reason Dimension	Stores details of the reason for which the claim review took place. These reasons are appended at the end of the review. Sample values: OTHER, UNKNOWN, INITAL, SCHED, and UNSCHED.
Claim Submission Method Dimension	Stores details of the means through which the claimant informs the Insurance Company of any loss. Sample values: Internet, Call, Mail, and so on.
Claim Reopening Reason Type Dimension	Stores the reopening reason type.  Sample values: R1 - Mathematical or computational mistake, R2 - Inaccurate data entry, D0 - Changes in-service date, E0 - Change in patient status, and so on.
Claim Handling Type Dimension	Stores the claim handling type details. This table is used to specify the situations, where claim handling can differ based on the claim amount, underwriting needs or other extenuating circumstances, or at the request of the claimant.  Sample values: OTHER, UNKNOWN, ACCELERATED, COMPLEX, EXPRESS, and STANDARD.

The mapping details for the Insurance Claims Investigation Dimension tables are as follows.

Table 305: The mapping details for the Insurance Claims Investigation Dimension tables

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table
Number	Name	Table Name	Name	Name
788	STG_CLAIM_INVES	Stage Claim	DIM_CLAIM_INVES	Claim Investigation
	TIGATION_DTLS	Investigation Details	TIGATION	Dimension

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
805	STG_INVSTGN_ST AT_REASON_MAS TER	Stage Investigation Status Reason Master	DIM_INVSTGN_ST AT_REASON	Investigation Status Reason Dimension
797	STG_CLM_INVSTG N_REASON_MAST ER	Stage Claim Investigation Reason Master	DIM_CLM_INVSTG N_REASON	Claim Investigation Reason Dimension
799	STG_CLM_REVIEW _REASON_MASTE R	Stage Claim Review Reason Master	DIM_CLM_REVIEW _REASON	Claim Review Reason Dimension
800	STG_CLM_SUBMS N_METHOD_MAST ER	Stage Claim Submission Method Master	DIM_CLM_SUBMS N_METHOD	Claim Submission Method Dimension
648	STG_CLM_REOPE N_RSN_TYPE_MAS TER	Stage Claim Reopening Reason Type Master	DIM_CLM_REOPEN _RSN_TYPE	Claim Reopening Reason Type Dimension
787	STG_CLAIM_HAND LING_TYPE_MAST ER	Stage Claim Handling Type Master	DIM_CLAIM_HAND LING_TYPE	Claim Handling Type Dimension

# 31.2.3 About Insurance Claims Estimation Dimension Tables

The Insurance Claims Estimation Dimension table names and their description are as follows.

Table 306: The Insurance Claims Estimation Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Claim Loss Type Dimension	Stores the codes that identify the type of loss that occurred. This table uses the Loss Kind code list. Sample values: Fire, Flood, Hail, Lightning, Other, Theft, and WNDST.
Human Body Parts Dimension	Stores details of the injured human body parts. Sample values: Eye, Nose, Legs, Hands, and so on.
Injury Nature Type Dimension	Stores details of the injury nature type. Sample values: NoPhysicalInjury, Amputation, AnginaPectoris, Inflammation, PoisoningGeneral, and so on.
Liability Loss Control Event Dimension	Stores details of the code that signifies the Loss Control Event category. Here, the event is the occurrence categorization that initiates the claim and uses the Liability Loss Control Event code list. Sample values: 100-PremisesHousekeeping, 200-OperationsFailureOfEquipment, 300-DefectiveProductOrWork, 410-Libel, and so on.
Claim Basis Dimension	Stores the code that signifies the basis for the claim, where the claim relates to the Coverage Kind of Loss payment. This table uses the Liability Claim Basis code list.

Logical Dimension Table Name	Dimension Table Description		
	Sample values: Contractual Liability, Negligence, Nuisance, Strict Liability, Vicarious Liability, and Voluntary Payments.		
Claim Estimate Type Dimension	Stores details of the type of claim estimate that is being provided. Sample values: OTHER, UNKNOWN, INITIALESTCOST, INITIALESTDURATION, REVISEDESTCOST, and REVISEDESTDURATION.		

The mapping details for the Insurance Claims Estimation Dimension tables are as follows.

Table 307: The mapping details for the Insurance Claims Estimation Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
789	STG_CLAIM_LOSS _TYPE_MASTER	Stage Claim Loss Type Master	DIM_CLAIM_LOSS_ TYPE	Claim Loss Type Dimension
803	STG_HUMAN_BOD Y_PARTS_MASTER	Stage Human Body Parts Master	DIM_HUMAN_BOD Y_PARTS	Human Body Parts Dimension
804	STG_INJURY_NAT URE_TYPE_MASTE R	Stage Injury Nature Type Master	DIM_INJURY_NAT URE_TYPE	Injury Nature Type Dimension
806	STG_LIAB_LOSS_C TRL_MASTER	Stage Liability Loss Control Event Master	DIM_LIAB_LOSS_C TRL	Liability Loss Control Event Dimension
813	STG_CLAIM_BASIS _MASTER	Stage Claim Basis Master	DIM_CLAIM_BASIS	Claim Basis Dimension
814	STG_CLAIM_ESTI MATE_TYPE_MAS TER	Stage Claim Estimate Type Master	DIM_CLAIM_ESTIM ATE_TYPE	Claim Estimate Type Dimension

## 31.2.4 About Insurance Claims Occurrence Dimension Tables

The Insurance Claims Occurrence Dimension table names and their description are as follows.

Table 308: The Insurance Claims Occurrence Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Claim Outside Authority Condition Dimension	Stores the codes that define the outside authority conditions applicable to the claim. This table uses the Outside Authority Condition code list.  Sample values: DC, DU, EG, LI, SU, and WP.
Claim Occurrence Dimension	Stores the Claim Occurrence. An Occurrence policy covers claims made for injuries sustained during the life of an insurance policy, even if the claim is filed after the policy is canceled or lapsed. The

Logical Dimension Table Name	Dimension Table Description
	policy must be active when the incident occurred. An Occurrence is an event that can result in the filing of an insurance claim.
Claim Cause Of Loss Dimension	Stores details of the cause of the loss or the peril triggering the loss for a claim.  Sample values: fire, flood, sprinkler leakage, and so on.
Claim Occurrence Type Dimension	Stores details of the claim occurrence type. Sample values: accident, incident, loss, occurrence, injury, and illness.

The mapping details for the Insurance Claims Occurrence Dimension tables are as follows.

Table 309: The mapping details for the Insurance Claims Occurrence Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table	Logical Dimension Table Name
790	STG_CLAIM_OA_C ONDITION_MASTE R	Stage Claim Outside Authority Condition Master	DIM_CLAIM_OA_C ONDITION	Claim Outside Authority Condition Dimension
791	STG_INS_OCCURR ENCE_DETAILS	Stage Insurance Occurrence Details	DIM_CLAIM_OCCU RRENCE	Claim Occurrence Dimension
796	STG_CLM_CAUSE_ OF_LOSS_MASTER	Stage Claim Cause Of Loss Master	DIM_CLM_CAUSE_ OF_LOSS	Claim Cause Of Loss Dimension
798	STG_CLM_OCCR_T YPE_MASTER	Stage Claim Occurrence Type Master	DIM_CLM_OCCR_T YPE	Claim Occurrence Type Dimension

# 31.3 About Insurance Claims T2Ts (Result Tables)

This section provides mapping details and descriptions of the Claims T2Ts Result tables.

NOTE

The Claim Identifier column is added to the FCT\_PARTY\_MEDICAL\_CONDITN\_DTLS, FCT\_PARTY\_MEDICAL\_TREATMENTS, and FCT\_PARTY\_DISABILITY\_DETAILS tables to link the Party Medical attributes to the Insurance Claims.

# 31.3.1 About Insurance Claim Details T2T (Result Table)

The Insurance Claim Details T2T and its description are as follows.

Table 310: The Insurance Claim Details T2T and its description

T2T Name	T2T Description
T2T_FCT_CLAIM_DETAILS	Stores all the attributes of a policy claim paid until date along with the summary of transactions.

The mapping details for the Insurance Claim Details T2T is as follows.

Table 311: The mapping details for the Insurance Claim Details T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_DET AILS	Stage Claim Details	FCT_CLAIM_DETAIL S	Fact Claim Details	T2T_FCT_CLAIM_DETAI LS

## 31.3.2 About Insurance Claim Party Map T2T (Result Table)

The Insurance Claim Party Map T2T and its description are as follows.

Table 312: The Insurance Claim Party Map T2T and its description

T2T Name	T2T Description
T2T_FCT_CLAIM_PARTY_MAP	Stores the mapping information between the Claim, Party, and Insurance.

The mapping details for the Insurance Claim Party Map T2T is as follows.

Table 313: The mapping details for the Insurance Claim Party Map T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_PAR	Stage Claim Party	FCT_CLAIM_PARTY_	Fact Claim Party	T2T_FCT_CLAIM_PARTY
TY_MAP	Map	MAP	Map	_MAP

# 31.3.3 About Insurance Claims Occurrence T2T (Result Table)

The Insurance Claims Occurrence T2T and its description are as follows.

Table 314: The Insurance Claims Occurrence T2T and its description

T2T Name	T2T Description
T2T_FCT_INS_OCCURRENCE_DETAILS	Stores the insurance occurrence details. An Occurrence policy covers claims made for injuries sustained during the life of an insurance policy, even if the claim is filed after the policy is

T2T Name	T2T Description
	canceled. An occurrence is an event that can result in the filing of an insurance claim.

The mapping details for the Insurance Claims Occurrence T2T is as follows.

Table 315: The mapping details for the Insurance Claims Occurrence T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INS_OCCUR RENCE_DETAILS	Stage Insurance Occurrence Details	FCT_INS_OCCURREN CE_DETAILS	Fact Insurance Occurrence Details	T2T_FCT_INS_OCCURRE NCE_DETAILS

### **About Insurance Claims Investigation T2T (Result Table)** 31.3.4

The Insurance Claims Investigation T2T and its description are as follows.

Table 316: The Insurance Claims Investigation T2T and its description

T2T Name	T2T Description
T2T_FCT_CLAIM_INVESTIGATION_DTLS	Stores the Claim Investigation details. The claims investigation is a process in which the insurance companies, insurance examiners, or investigators obtain information to evaluate an insurance claim. The investigators look for evidence whether a claim is legitimate or illegitimate.

The mapping details for the Insurance Claims Investigation T2T is as follows.

Table 317: The mapping details for the Insurance Claims Investigation T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_INVE STIGATION_DTLS	Stage Claim Investigation Details	FCT_CLAIM_INVESTI GATION_DTLS	Fact Claim Investigation Details	T2T_FCT_CLAIM_INVES TIGATION_DTLS

### **About Insurance Claims Estimation T2T (Result Table)** 31.3.5

The Insurance Claims Estimation T2T and its description are as follows.

Table 318: The Insurance Claims Estimation T2T and its description

T2T Name	T2T Description
T2T_FCT_CLAIM_BREAK_UP_DETAILS	Stores reserve details of the claim break up. A claims reserve is the money set aside by the insurance companies to pay the policyholders, who have filed or are expected to file legitimate claims on their policies. Insurers use the fund to pay out incurred claims that are yet to be settled.

The mapping details for the Insurance Claims Estimation T2T is as follows.

Table 319: The mapping details for the Insurance Claims Estimation T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_BRE AK_UP_DETAILS	Stage Claim Break Up Reserve Details	FCT_CLAIM_BREAK_ UP_DETAILS	Fact Claim Break Up Reserve Details	T2T_FCT_CLAIM_BREAK _UP_DETAILS

### **About Insurance Claim Transactions T2T (Result Table)** 31.3.6

The Insurance Claim Transactions T2T and its description are as follows.

Table 320: The Insurance Claim Transactions T2T and its description

T2T Name	T2T Description
T2T_FCT_CLAIM_TRANSACTIONS	Stores all the transactions related to claims reported with the entity.

The mapping details for the Insurance Claim Transactions T2T are as follows.

Table 321: The mapping details for the Insurance Claim Transactions T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CLAIM_TXN	Stage Claim	FCT_CLAIM_TRANSA	Fact Claim	T2T_FCT_CLAIM_TRANS
S	Transactions	CTION	Transaction	ACTIONS

### **Deploying Insurance Claims Tables on Hive** 31.4

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

### **Populating Insurance Claims Dimension Tables** 31.5

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and Check Error Messages.

### **Populating Insurance Claims T2Ts (Result Tables)** 31.6

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics** 31.7

You can see the following topics related to other function-specific tables:

- **Insurance Underwriting Entities**
- **Insurance Contracts Tables**
- General Ledger Data and Management Reporting Tables

- Insurance Claims Tables
- **Transaction Summary Tables**

# 32 Actuarial Assumptions Tables

This chapter provides information about Insurance Actuarial Policy Summary, Mortality and Morbidity tables, and several Insurance Lapse Rate Assumptions Result tables in the Oracle Insurance Data Foundation Application.

### **Topics:**

- Actuarial Assumptions Dimension Tables
- Financial Assumptions Tables
- Demographic Assumptions Tables
- Deploying Actuarial Assumptions Tables on Hive
- Populating Actuarial Assumptions Dimension Tables
- Populating Actuarial Assumptions T2T Result Tables
- Related Topics

An actuarial assumption is an estimate of an uncertain variable input into a financial model, normally for the purposes of calculating premiums or benefits.

# 32.1 Actuarial Assumptions Dimension Tables

Actuarial Assumption Dimension table names and their description are given here.

Table 322: Actuarial Assumption Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Actuarial Assumption Dimension	This table stores the name of the set of Actuarial Assumptions used for valuations. While the Actuarial valuation code can remain the same, parameters for the same can change for different valuation dates.
Premium Rate Dimension	This table stores the details of the Premium rate. Premium tables provide premium rates for a given premium basis amount.

The mapping details for the Actuarial Assumption Dimension tables are given here.

Table 323: The mapping details for the Actuarial Assumption Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
683	STG_ACTUARIAL _ASSUMPTN_M ASTER	Stage Actuarial Assumption Master	DIM_ACTUARIAL_ ASSUMPTN	Actuarial Assumption Dimension
733	STG_PREMIUM_ RATE_TABLE_M ASTER	Stage Premium Rate Master	DIM_PREMIUM_RA TE_TABLE	Premium Rate Dimension

There are two types of Insurance Actuarial Assumptions tables:

- **Financial Assumptions Tables**
- **Demographic Assumptions Tables**

### **Financial Assumptions Tables** 32.2

Financial assumptions evaluate the projected benefits of the Party or organization in a certain plan. These financial assumptions include assumptions about interest rates, and lapse rate assumptions.

## **Insurance Lapse Rate Assumptions**

Insurance Lapse Rate is the rate at which insurance policy terminates because of the failure in premium payment by the policyholder. The Insurance Lapse Rate Assumptions table stores the insurance lapse rates to be used for assessment of insurance policies. The lapse rate group code binds multiple lapse rates under one heading.

The purpose of the Insurance Lapse Rate Assumptions table is that the Insurers can set premiums which results in high or low-priced products.

## Interest Rate Curve (IRC)

Interest Rate Curve is a line that plots the interest rates, at a set point in time, of bonds having equal credit quality but differing maturity dates.

Financial Assumptions include Insurance Lapse Rate Assumptions and Interest Rate Curve (IRC).

## **Topics:**

- Interest Rate Curve Dimension Table
- Insurance Lapse Rate Assumptions Table
- **Insurance Cost of Living Adjustments Table**
- **Premium Rate Tables**

#### **Interest Rate Curve Tables** 32.2.1

#### 32.2.1.1 **About Interest Rate Curve Dimension Table**

Interest Rate Curve Dimension table name and its description are given here.

Table 324: Interest Rate Curve Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Interest Rate Curve Dimension	This table stores the interest rate curve definitions.

The mapping details for the Interest Rate Curve Dimension table are given here.

Table 325: The mapping details for the Interest Rate Curve Dimension table

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table
Number	Name	Table Name	Name	Name
246	STG_IRCS	Stage Interest Rate Curve	DIM_IRC	Interest Rate Curve Dimension

## **32.2.2** Insurance Lapse Rate Assumptions Table

## **32.2.2.1** About Insurance Lapse Rate Assumptions T2T (Result Table)

Insurance Lapse Rate Assumptions T2T and its description is given here.

Table 326: Insurance Lapse Rate Assumptions T2T and its description

T2T name	T2T Description
T2T_FCT_LAPSE_RATE_ASSUMPTIONS	This T2T stores the insurance lapse rates, which is used for the valuation of insurance policies. This T2T stores the lapse rate group code that binds multiple lapse rates under one heading.

The mapping details for the Insurance Lapse Rate Assumptions T2T is given here.

Table 327: The mapping details for the Insurance Lapse Rate Assumptions T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INSURANCE	Stage Insurance	FCT_LAPSE_RATE	Fact Lapse Rate	T2T_FCT_LAPSE_RATE_A
_LAPSE_R ATES	Lapse Rates	_ASSUMPTIONS	Assumptions	SSUMPTIONS

# **32.2.3** Insurance Cost of Living Adjustment Tables

The Insurance Cost of Living Adjustment Dimension table is used to determine the retirement, annuity, or other similar benefits. The methodology identifies a benchmark and based on benchmark movements, adjustment of living costs are published either by the government agency or the insurer.

## 32.2.3.1 About Insurance Cost of Living Adjustment Dimension Table

Insurance Cost of Living Adjustment Dimension table name and its description is given here.

Table 328: Insurance Cost of Living Adjustment Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Cost of Living Adjustment Dimension	This table stores the code and benchmark details for the Cost of Living Adjustments definition.

The mapping details for the Insurance Cost of Living Adjustment Dimension table is given here.

Table 329: The mapping details for the Insurance Cost of Living Adjustment Dimension table

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
682	STG_COLA_ADJ USTMENT_MAS TER	Stage Cost of Living Adjustment Master	DIM_COLA_ADJUS TMENT	Cost of Living Adjustment Dimension

## 32.2.3.2 About Insurance Cost of Living Adjustment T2T (Result Table)

Insurance Cost of Living Adjustment T2T and its description is given here.

Table 330: Insurance Cost of Living Adjustment T2T and its description

T2T name	T2T Description
T2T_FCT_COLA_ADJUSTMENT_SCHEDUL E	This T2T stores the Cost of Living Adjustments for a given COLA definition and year of adjustment details. They are used to determine the retirement, annuity, or similar other benefits.

The mapping details for the Insurance Cost of Living Adjustment T2T is given here.

Table 331: The mapping details for the Insurance Cost of Living Adjustment T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_COLA_ADJU STMENT_SCHED ULE	Stage Cost of Living Adjustment Schedule	FCT_COLA_ADJUS TMENT_SCHEDUL E	Fact Cost of Living Adjustment Schedule	T2T_FCT_COLA_ADJUST MENT_SCHEDULE

## 32.2.4 Premium Rate Tables

When a person applies for a Life Insurance policy, their insurance company examines the results of their physical examination, their family health history, and lifestyle to determine if they fit into one of their standard categories or classifications.

For example, different types of categories are:

- Preferred Select: This classification usually refers to very healthy. In order to qualify for this level, you need to have a normal weight and height as well as no family factors that could lead to an early death. This category enjoys the lowest premiums and may also be called Preferred Elite or Preferred Plus.
- Standard Plus: These applicants are still in great health but a medical or lifestyle factor prevents them from qualifying for a Preferred Select. Being overweight, having high blood pressure or cholesterol issues could be the culprit.

- Standard: This is for everyone who is average when it comes to health. They have a normal life expectancy and could have weight issues or a parent that died early.
- Preferred Smoker: If you are a smoker who would normally fall into the preferred select category, this is where you will fall. Smokers will always pay more for life insurance so be prepared for a higher premium.
- Standard Smoker: A smoker who would fall into the standard category if they didn't smoke will be placed in this category.

When the Life Insurance applicant does not fit into one of the standard rating categories due to a health issue, risky occupation, or an adventurous lifestyle (think skydivers, rock climbers, and so on), they may end up with a table rating. Such records are categorized and stored in Premium Rate tables.

For information on how the risk factors affect the Insurance Underwriting of a Life Insurance applicant, see Insurance Underwriting Tables for Risk Analysis.

#### **About Premium Rate Dimension Table** 32.2.4.1

Premium Rate Dimension table name and its description are given here.

Table 332: Premium Rate Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
Premium Rate Dimension	This table stores the details of the Premium rate. Premium tables provide premium rates for a given premium basis amount.

The mapping details for the Premium Rate Dimension table is given here.

Table 333: The mapping details for the Premium Rate Dimension table

Map Reference	Source Table	Logical Stage Table	Dimension Table	Logical Dimension Table Name
Number	Name	Name	Name	
733	STG_PREMIUM_RA TE_TABLE_MASTE R	Stage Premium Rate Master	DIM_PREMIUM_RAT E_TABLE	Premium Rate Dimension

## 32.2.4.2 About Premium Rate T2T (Result Table)

Premium Rate T2T name and its description are given here.

Table 334: Premium Rate T2T name and its description

T2T Name	T2T Description
T2T_FCT_PREMIUM_RATE_TABLE_DTLS	This T2T stores the Premium Rate table details.

The mapping details for the Premium Rate T2T is given here.

Table 335: The mapping details for the Premium Rate T2
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Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PREMIUM_R ATE_TABLE_DTL S	Stage Premium Rate Table Details	FCT_PREMIUM_RA TE_TABLE_DTLS	Fact Premium Rate Table Details	T2T_FCT_PREMIUM_RAT E_TABLE_DTLS

# **32.3** Demographic Assumptions Tables

Demographic assumptions evaluate the projected benefits of all the parties or organizations in a certain plan. These demographic assumptions include assumptions about mortality, disability, termination of employment, and retirement.

Demographic Assumptions includes:

Insurance Mortality

The Insurance Mortality is the amount charged by the Insurer for delivering the guaranteed Sum Assured on premature death of the policyholder.

The purpose of the Insurance Mortality table is to store the sum charged every year by the Insurer to the policyholder to deliver the life cover.

Insurance for Morbidity

Morbidity on insurance terms is the insurance coverage provided by the insurer to the policyholder for the specified illness of the policyholder.

## Topic:

• Insurance Mortality and Morbidity Tables

# 32.3.1 Insurance Mortality and Morbidity Tables

## 32.3.1.1 About Insurance Mortality and Morbidity Dimension Tables

Insurance Mortality and Morbidity Dimension table names and their description are given here.

Table 336: Insurance Mortality and Morbidity Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Insurance Morbidity Dimension	This table stores the morbidity rates. It is a statistical table used by actuaries in determining the incidence of illnesses and accidents and the longevity of the disability resulting therefrom. This is used in computing policy premiums and reserves.
Insurance Mortality Dimension	This table stores the mortality table required for insurance carriers. A 'Mortality Table' is the one that shows the rate of deaths occurring in a defined population during a selected time interval, or survival from birth to any given age. Statistics included in the mortality table show the probability of a person's death before their next birthday based on their age. Also known

Logical Dimension Table Name	Dimension Table Description
	as the periodic table, this is based on the mortality experience of a population during a relatively short period of time.
Insurance Mortality Multiplier Dimension	This table stores the mortality multipliers' names. Multipliers are generally calculated to reflect a more accurate estimation of mortality depending on growth in population and given rate of return.

The mapping details for the Insurance Mortality and Morbidity Dimension tables are given here.

Table 337: The mapping details for the Insurance Mortality and Morbidity Dimension tables

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
424	STG_INS_MORBI	Stage Insurance	DIM_INS_MORBIDI	Insurance Morbidity
	DITY_MASTER	Morbidity Master	TY	Dimension
425	STG_INS_MORT	Stage Insurance	DIM_INS_MORTALI	Insurance Mortality
	ALITY_MASTER	Mortality Master	TY	Dimension
684	STG_INS_MORT ALITY_MULT_M ASTER	Stage Insurance Mortality Multiplier Master	DIM_INS_MORTALI TY_MULTIPLIER	Insurance Mortality Multiplier Dimension

#### **About Insurance Mortality and Morbidity T2Ts (Result Tables)** 32.3.1.2

Insurance Mortality and Morbidity T2Ts and their description are given here.

Table 338: Insurance Mortality and Morbidity T2Ts and their description

T2T Name	T2T Description
T2T_FCT_INSURANCE_MORTALITY	This T2T stores the sum charged every year by the Insurer to the policyholder to deliver the life cover.
T2T_FCT_INSURANCE_MORBIDITY	This T2T stores details of morbidity rates, which are actual age, survival probabilities, and so on, related to particular mortality tables.
T2T_FCT_INS_MORTALITY_MULT_DT LS	This T2T stores the mortality multipliers. Multipliers are generally calculated to reflect a more accurate estimation of mortality depending on growth in population and given rate of return.

The mapping details for the Insurance Mortality and Morbidity T2Ts are given here.

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INSURANCE	Stage Insurance	FCT_INSURANCE_	Fact Insurance	T2T_FCT_INSURANCE_M
_MORTALITY	Mortality	MORTALITY	Mortality	ORTALITY
STG_INSURANCE	Stage Insurance	FCT_INSURANCE_	Fact Insurance	T2T_FCT_INSURANCE_M
_MORBIDITY	Morbidity	MORBIDITY	Morbidity	ORBIDITY
STG_INS_MORTA LITY_MULT_DTL S	Stage Insurance Mortality Multiplier Details	FCT_INS_MORTAL ITY_MULT_DTLS	Fact Insurance Mortality Multiplier Details	T2T_FCT_INS_MORTALIT Y_MULT_DTLS

Table 339: The mapping details for the Insurance Mortality and Morbidity T2Ts

### **Deploying Actuarial Assumptions Tables on Hive** 32.4

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts

### **Populating Actuarial Assumptions Dimension Tables** 32.5

Follow this SCD process to populate data into a Dimension table:

**NOTE** 

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the Slowly Changing Dimension (SCD) Process.
- 2. To check the SCD batch execution status of a Dimension table, follow the procedure Check the Execution Status of the SCD Batch.
- 3. To verify log files, and check the error messages (if any), follow the procedure Verify Log Files and **Check Error Messages**.

### **Populating Actuarial Assumptions T2T Result Tables** 32.6

Follow this T2T process to populate data into any T2T Result table:

**NOTE** Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics 32.**7

You can see the following topics related to other function-specific tables:

**Insurance Contracts Tables** 

# 33 Actuarial Output Tables

This section provides information about Actuarial Outputs such as Actuarial Cash Flows, Calculations, and Result Areas in the Oracle Insurance Data Foundation application.

### **Topics:**

- About Actuarial Assumed Policy Summary
- About Actuarial Cash Flows, Calculations, and Result Areas Summary Tables
- Deploying Actuarial Cash Flows, Calculations, and Result Areas Summary Tables on Hive
- Populating Actuarial Cash Flows, Calculations, and Result Areas Summary Dimension Tables
- Populating Actuarial Cash Flows, Calculations, and Result Areas Summary T2T Result Tables
- Related Topics

# 33.1 About Actuarial Assumed Policy Summary

The Actuarial Assumed Policy Summary table stores the cash flow of all the reinsurance policies at an aggregated level for the purpose of reporting the summary. The result table is:

FCT\_ACT\_ASSUMED\_POLICY\_SMMRY

For the Fact Actuarial Assumed Policy Summary table, the data is sourced from the Actuarial engine.

# 33.2 About Actuarial Cash Flows, Calculations, and Result Areas Summary Tables

Actuarial Cash Flows, Calculations, and Result Areas Summary tables store attributes pertaining to insurance cash flows, calculations, and Result Areas related data on an 'as-is' basis received from the source system. The data is populated in the following Dimension tables through Seeded Data. Dimension table names and their description are given here.

Table 340: Actuarial Cash Flows, Calculations, and Result Areas Summary Dimension tables and their description

Dimension Table Name	Logical Dimension Table Name	Remarks
DIM_ONEROUS_CLASSIFICATI ON	Onerous Classification Dimension	This is the Seeded dimension table for the onerous classification of the contract at the Homogenous risk level.  Sample values: ONEROUS, POSO, REMANINGCONTRACTS.
DIM_INS_ACCTG_VAL_APPRO ACH	Insurance Accounting Valuation Approach Dimension	This is the Seeded dimension table for the Insurance Accounting Valuation Approach. Sample values: BBA, VFA, PAA.
DIM_INS_RISK_EXPIRY_STATU S	Insurance Risk Expiry Status Dimension	This is the Seeded dimension table for Insurance Risk Expiry Status. Samples values: EXPIRED, UNEXPIRED.

The following tables are direct results populated from processing or actuarial engines:

Table 341: Result tables populated from processing or actuarial engines

Fact Table Name	Logical Fact Table Name	Fact Table Description
FCT_ACTUARIAL_POLICY_SU MMARY	Fact Actuarial Policy Summary	This table stores the cash flow of all the individual policies at an aggregated level for reporting the summary. These are the resulting tables, which contain calculations.
FCT_INS_HRG_CASH_FLOW	Fact Insurance Homogeneous Risk Group Cash Flow	This table stores the cash flow estimates at Homogeneous Risk Group level for the insurance policy group.
FCT_INS_HRG_CASH_FLOW_S UMMARY	Fact Insurance Homogeneous Risk Group Cash Flow Summary	This table stores the cash flow estimates at Homogeneous Risk Group summary level of Homogenous Risk Group.

## **Topics:**

- About Financial Element Dimension Table
- About Insurance Scenario Dimension Table
- About Insurance Vintage Dimension Table
- About Fact Insurance Policy Cash Flow T2T (Result Table)

# 33.2.1 About Financial Element Dimension Table

Insurance Financial Element Dimension table name and its description are given here.

Table 342: Insurance Financial Element Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
DIM_INS_FINANCIAL_ELEMENT	This table stores Insurance financial elements details.
	Sample values: Outflow Sum Insured, Outflow Expected Benefits, Outflow Expected Expense, and so on.

The mapping details for the Insurance Financial Element Dimension table is given here.

Table 343: The mapping details for the Insurance Financial Element Dimension table

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
487	STG_INS_FINANCIAL _ELMNT_MASTER	Stage Insurance Financial Element Master	DIM_INS_FINAN CIAL_ELEMENT	Insurance Financial Element Dimension

### **About Insurance Scenario Dimension Table** 33.2.2

Insurance Scenario Dimension table name and its description are given here.

Table 344: Insurance Scenario Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
DIM_INSURANCE_SCENARIO	This table stores different scenarios or assumptions that can affect the calculation of cash flow.
	Sample values: Adverse, Severely Adverse, and so on.

The mapping details for the Insurance Financial Element Dimension table is given here.

Table 345: The mapping details for the Insurance Financial Element Dimension table

Map Reference	Source Table	Logical Stage	Dimension Table	Logical Dimension Table Name
Number	Name	Table Name	Name	
486	STG_INS_SCE NARIO_MAST ER	Stage Insurance Scenario Master	DIM_INSURANCE_SCE NARIO	Insurance Scenario Dimension

### **About Insurance Vintage Dimension Table** 33.2.3

Insurance Vintage Dimension table name and its description are given here.

Table 346: Insurance Vintage Dimension table name and its description

Logical Dimension Table Name	Dimension Table Description
DIM_INSURANCE_VINTAGE	This table stores Insurance Vintage associated with each process. Vintage refers to the period of origination or first premium paid or major change on contract terms and conditions. This is a custom-defined table. The end-user can store monthly, yearly, half-yearly, quarterly values, or as required.  Sample values: Q1YYYY, Q2YYYY, M1YYYY, and so on.

The mapping details for the Insurance Financial Element Dimension table is given here.

Table 347: The mapping details for the Insurance Financial Element Dimension table

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
485	STG_INSURANCE_VI	Stage Insurance	DIM_INSURANCE_VI	Insurance Vintage
	NTAGE_MASTER	Vintage Master	NTAGE	Dimension

## 33.2.4 About Fact Insurance Policy Cash Flow T2T (Result Table)

Fact Insurance Policy Cash Flow T2Ts and their description is given here.

Table 348: Fact Insurance Policy Cash Flow T2Ts and their description

T2T Name	T2T Description
T2T_FCT_INS_POLICY_CASH_FLOW	This T2T stores the cash flow estimates at a policy level.
T2T_FCT_INS_ASUM_POLICY_CSHFLW	This T2T stores the cash flow estimates at a policy level. It captures the details for assumed policies.

The mapping details for the Fact Insurance Policy Cash Flow T2Ts is given here.

Table 349: The mapping details for the Fact Insurance Policy Cash Flow T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_INS_POLICY_ CASH_FLOW	Stage Insurance Policy Cash Flow	FCT_INS_POLICY_ CASH_FLOW	Fact Insurance Policy Cash Flow	T2T_FCT_INS_POLICY_ CASH_FLOW
STG_INS_ASSUM_ POLICY_CASH_FL OW	Stage Insurance Assumed Policy Cash Flow	FCT_INS_ASSUM_ POLICY_CASH_FL OW	Fact Insurance Assumed Policy Cash Flow	T2T_FCT_INS_ASUM_P OLICY_CSHFLW

# 33.3 Deploying Actuarial Cash Flows, Calculations, and Result Areas Summary Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List of Unsupported T2Ts</u>

# 33.4 Populating Actuarial Cash Flows, Calculations, and Result Areas Summary Dimension Tables

Follow this SCD process to populate data into a Dimension table:

NOTE

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- 1. To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status of the SCD Batch">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

# 33.5 Populating Actuarial Cash Flows, Calculations, and Result Areas Summary T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# 33.6 Related Topics

You can see the following topics related to other function-specific tables:

- Insurance Contracts Tables
- Transaction Summary Tables

# **34 Common Customer Summary Tables**

This section provides information about Common Customer Summary tables in the Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Dimension Tables That Load Common Customer Summary T2Ts
- About T2Ts (Result Tables) that Load Common Customer Summary T2Ts
- About Common Customer Summary T2T (Result Table)
- <u>Deploying Common Customer Summary Tables on Hive</u>
- Populating Data in the Common Customer Summary T2T Result Tables
- Related Topics

Common Customer Summary table stores attribute pertaining to customer-related data on an 'as-is' basis received from the source system. Customer balances are derived from the account summary. The customer relationship table derives the relationship between accounts and customers. Common customer summary data is populated for all the active customers in the customer dimension.

# 34.1 About Dimension Tables that Load Common Customer Summary T2T

Common Customer Summary Dimension table names and their description are given here.

Table 350: Common Customer Summary Dimension table names and their description

Logical Dimension Table Name	Dimension Table Description
Channel Dimension	This table stores the master list of all unique codes that denote channels through which customers can be acquired.
Education Dimension	This table stores the details of the education master information of a customer.
Geography Dimension	This table stores a distinct list of all geographical locations, where any of the transaction channels of the Insurance Company are located.
Industry Dimension	This table stores industry information.
Account Management Dimension	This table stores the organization hierarchy details across the management.
Migration Reasons Dimension	This table stores reasons for deviation.
Vintage Dimension	This table stores vintage definitions.
Customer Dimension	This table stores the list of the customers and counterparties, and their attributes of an organization
Profession Dimension	This table stores the master list of all customer professions.
Marital Status Dimension	This table stores customer marital status details.
Customer Type Dimension	This table stores the master list of customer types.
Credit Rating Dimension	This table stores credit rating information.

The mapping details for the Common Customer Summary Dimension tables are given here.

Table 351: The mapping details for the Common Customer Summary Dimension tables

Map Reference Number	Source Table Name	Logical Stage Table Name	Dimension Table Name	Logical Dimension Table Name
21	STG_SALES_CHANN EL_MASTER	Stage Sales Channel Master	DIM_CHANNEL	Channel Dimension
40	STG_CUST_EDUCATI ON_MASTER	Stage Customer Education Master	DIM_EDUCATION	Education Dimension
47	STG_GEOGRAPHY_M ASTER	Stage Geography Master	DIM_GEOGRAPHY	Geography Dimension
51	STG_INDUSTRY_MA STER	Stage Industry Master	DIM_INDUSTRY	Industry Dimension
62	STG_ACCOUNT_MG MT_MASTER	Stage Account Management Master	DIM_MANAGEMEN T	Account Management Dimension
68	STG_MIGRATION_RE ASON_MASTER	Stage Migration Reason Master	DIM_MIGRATION_ REASONS	Migration Reasons Dimension
116	STG_VINTAGE_MAS TER	Stage Vintage Master	DIM_VINTAGE	Vintage Dimension
335	VW_STG_PARTY_MA STER_CUST	Stage Party Master Customer View	DIM_CUSTOMER	Customer Dimension
344	STG_PROFESSION_M ASTER	Stage Profession Master	DIM_PROFESSION	Profession Dimension
389	STG_MARITAL_STAT US_MASTER	Stage Marital Status Master	DIM_MARITAL_ST ATUS	Marital Status Dimension
418	STG_PARTY_TYPE_ MASTER	Stage Party Type Master	DIM_CUSTOMER_ TYPE	Customer Type Dimension
466	STG_CREDIT_RATIN G_MASTER	Stage Credit Rating Master	DIM_CREDIT_RATI NG	Credit Rating Dimension

## **About T2Ts (Result Tables) that Load Common Customer** 34.2 **Summary T2T**

T2Ts for Common Customer Summary and their description is given here.

Table 352: T2Ts for Common Customer Summary and their description

T2T Name	T2T Description
T2T_FCT_PARTY_RATING_DETAILS	This T2T stores the rating details of the Customer or Counterparty or Guarantor and so on.

T2T Name	T2T Description
T2T_FCT_PARTY_FINANCIALS	This T2T stores the financial information (Balance Sheet, Profit, and Loss Statement, and Ratios) of the parties like Customer and Guarantor.

The mapping details for T2Ts to load Common Customer Summary is given here.

Table 353: The mapping details for T2Ts to load Common Customer Summary

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_PARTY_RATI	Stage Party	FCT_PARTY_RATI	Fact Party Rating	T2T_FCT_PARTY_RATING_
NG_DETAILS	Rating Details	NG_DETAILS	Details	DETAILS
STG_PARTY_FIN	Stage Party	FCT_PARTY_FINA	Fact Party Financials	T2T_FCT_PARTY_FINANCI
ANCIALS	Financials	NCIALS		ALS

# 34.3 About Common Customer Summary T2T (Result Table)

Common Customer Summary T2T and its description are given here.

Table 354: Common Customer Summary T2T and its description

T2T Name	T2T Description
T2T_FCT_COMMON_CUSTOMER	This T2T stores different attributes pertaining to raw customer data received from the source system.

The mapping details for the Common Customer Summary T2T is given here.

Table 355: The mapping details for the Common Customer Summary T2T

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_CUSTOMER	Stage Customer	FCT_COMMON_CUST	Fact Common	T2T_FCT_COMMON_CU
_DETAILS	Details	OMER_SUMMARY	Customer Summary	STOMER

# 34.4 Deploying Common Customer Summary Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List</u> of <u>Unsupported T2Ts</u>

# 34.5 Populating Data in the Common Customer Summary T2T Result Tables

Follow these steps to populate data in the Common Customer Summary T2T Result tables:

- 1. Prerequisites.
- 2. Populating Common Customer Summary T2T Result Tables.

## 34.5.1 Prerequisites

To load the resultant tables required for Common Customer Summary T2T, follow these steps:

- 1. Populating Dimension Tables to Load Common Customer Summary T2T.
- 2. Populating T2Ts to Load Common Customer Summary T2T.
- 3. Populating Other Tables to Load Common Customer Summary T2T.

## 34.5.1.1 Populating Dimension Tables to Load Common Customer Summary T2T

For Dimension mapping details for this section, see <u>About Dimension Tables That Load Common</u> <u>Customer Summary T2Ts</u>. Follow this SCD process to populate data into any Dimension tables that are used to load Common Customer Summary T2Ts:

NOTE

You can also follow this SCD process to populate data into any Hive-related Dimension table.

- **1.** To populate data into a Dimension table, execute the SCD batch. For a detailed procedure, see the <u>Slowly Changing Dimension (SCD) Process</u>.
- **2.** To check the SCD batch execution status of a Dimension table, follow the procedure <a href="Check the Execution Status">Check the Execution Status of the SCD Batch</a>.
- **3.** To verify log files, and check the error messages (if any), follow the procedure <u>Verify Log Files and Check Error Messages</u>.

## 34.5.1.2 Populating T2Ts to Load Common Customer Summary T2T

For T2T mapping details for this section, see <u>About T2Ts (Result Tables) that Load Common Customer Summary T2Ts</u>.

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - **a.** Prerequisites for loading T2T.
  - b. Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

#### 34.5.1.3 Populating Other Tables to Load Common Customer Summary T2T

Load these tables with data:

DIM\_BANDS

To follow the Dimension loading process, see Populating Dimension Tables to Load Common Customer Summary T2T.

DIM\_GENDER

To follow the Dimension loading process, see Populating Dimension Tables to Load Common **Customer Summary T2T.** 

FCT\_COMMON\_ACCOUNT\_SUMMARY

For mapping details, see Other Common Account Summary Tables and About Common Policy Summary T2Ts (Result Tables).

To follow the T2T process, see Populating T2Ts to Load Common Customer Summary T2T.

### **Populating Common Customer Summary T2T Result Tables** 34.5.2

Follow T2T process (Populating T2Ts to Load Common Customer Summary T2T) to populate data into any Common Customer Summary T2T Result table:

**NOTE** 

You can also follow this T2T process to populate data into any Hive related Common Customer Summary T2T Result table.

For T2T mapping details for this section, see About Common Customer Summary T2T (Result Table).

### **Related Topics** 34.6

You can see the following topics related to other function-specific tables:

Party Subject Area

# 35 Credit Score Model and Probability of Default Model Tables

This section provides information about the Credit Score Model and Probability of Default Model tables in the Data Foundation application and step-by-step instructions to use this section.

## **Topics:**

- About Credit Score Model and Probability of Default Model T2Ts (Result Tables)
- About Mapper for Credit Score Model to Regulatory Credit Score Model
- Maintenance of Mapper for Credit Score Model to Regulatory Credit Score Model
- Loading Mapper Maintenance through Backend
- Deploying Credit Score Model and Probability of Default Model Tables on Hive
- Populating Credit Score Model and Probability of Default Model T2T Result Tables
- Related Topics

# 35.1 About Credit Score Model and Probability of Default Model T2Ts (Result Tables)

Credit Score Model and Probability of Default Model T2Ts and their description are given here.

Table 356: Credit Score Model and Probability of Default Model T2Ts and their description

T2T Name	T2T Description
T2T_FCT_ACCT_CREDIT_SCORE_DETAILS	This T2T stores the details of the credit score of account throughout its lifetime.
T2T_FCT_PARTY_PD_DETAILS	This T2T stores the probability of default values as of the given date for all relevant Party.
T2T_FCT_INSTRUMENT_PD_DETAILS	This T2T stores the probability of default values as of the given date for all relevant instruments.

The mapping details for the Credit Score Model and Probability of Default Model T2Ts are given here.

Table 357: The mapping details for the Credit Score Model and Probability of Default Model T2Ts

Source Table Name	Logical Stage Table Name	Target Table Name	Logical Fact Table Name	T2T Definition Name
STG_ACCT_CREDI T_SCORE_DETAIL S	Stage Account Credit Score details	FCT_ACCT_CREDIT_ SCORE_DETAILS	Fact Account Credit Score details	T2T_FCT_ACCT_CRED IT_SCORE_DETAILS
STG_PARTY_PD_D ETAILS	Stage Party Probability of Default Details	FCT_PARTY_PD_DET AILS	Fact Party Probability of Default Details	T2T_FCT_PARTY_PD_ DETAILS

Source Table Name	Logical Stage Table Name	Target Table Name	Logical Fact Table Name	T2T Definition Name
STG_INSTRUMENT _PD_DETAILS	Stage Instrument Probability of Default Details	FCT_INSTRUMENT_ PD_DETAILS	Fact Instrument Probability of Default Details	T2T_FCT_INSTRUME NT_PD_DETAILS

## Topic:

Staging Data Expectation for Credit Score Model

### **Staging Data Expectation for Credit Score Model** 35.1.1

Stage Account Credit Score Details and Stage Service Account Credit Score Details tables expect data incrementally and not in snapshot mode.

For example, Account-1 loaded on Day-1 with Model-1 and Score-1need not be loaded every day till data gets changed. However, the Reporting tables Fact Account Credit Score Details and Fact Service Account Credit Score Details are mapped to reports in snapshot mode. In the T2T process, the latest records available on a daily basis for a given account and model are packed and loaded to the Reporting tables.

### **About Mapper for Credit Score Model to Regulatory** 35.2 Credit Score Model

Credit Score Model dimension table is a slowly changing dimension (SCD), which has user-specific values for available credit score models. Regulatory Credit Score Model dimension table is a seeded dimension, which has the reporting specific values for regulatory reporting requirements. There are one column in the tables Fact Account Credit Score Details table and Fact Service Account Credit Score Details, which stores Regulatory Credit Score Model Surrogate Key (SKey). This column is populated through a mapper table maintained through the Mapper Maintenance Component of OFSAAI.

## Maintenance of Mapper for Credit Score Model to 35.3 **Regulatory Credit Score Model**

To maintain the Mapper for Credit Score Model to Regulatory Credit Score Model, perform these steps.

1. From OFSAA Home, select Oracle Insurance Data Foundation, select Unified Analytical Metadata, select Business Metadata Management, and then select Map Maintenance.

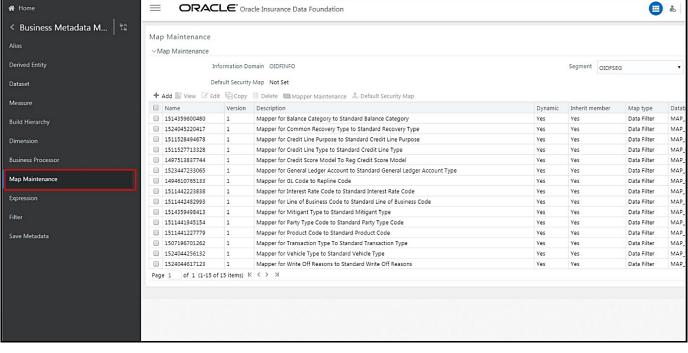
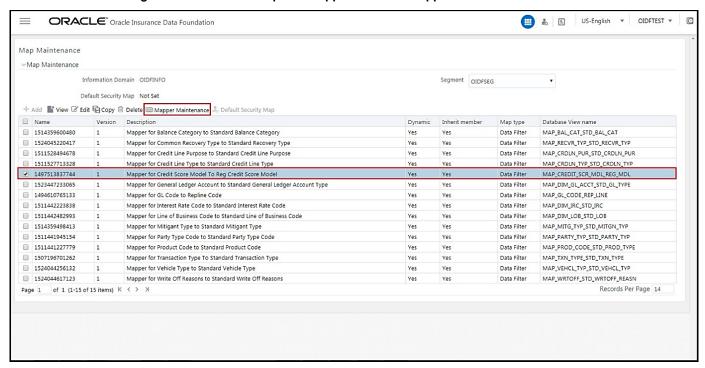


Figure 135: Navigate to the Map Maintenance page

**2.** The **Map Maintenance** page appears. Select Mapper for Credit Score Model to Regulatory Credit Score Model. Click the Mapper Maintenance icon.

Figure 136: Select the required Mapper and click Mapper Maintenance



**3.** The **Mapper Maintenance** page is displayed. OIDF Maps OTH and MSG out-of-the-box for this mapper. The remaining Mappings can be maintained by the user according to user-specific values.

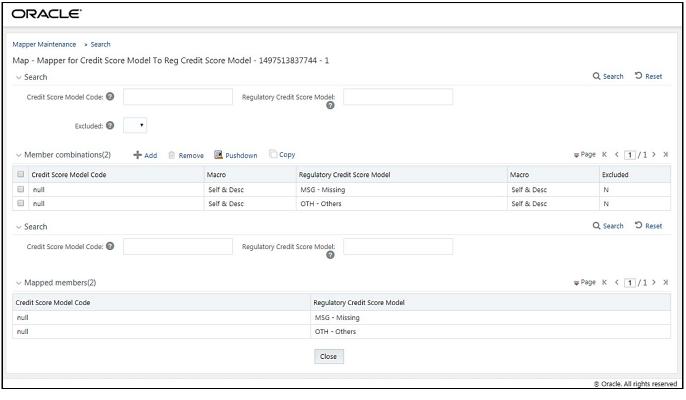


Figure 137: The Mapper Maintenance page

## **Topics:**

- **Prerequisites for Mapper Maintenance**
- **Possible Mapping Combinations**

### **Prerequisites for Mapper Maintenance** 35.3.1

- 1. Load Credit Score Model Dimension using SCD.
- 2. Resave the following hierarchies:
  - HSCRMDL1 Credit Score Model Code
  - HSCRMDL2 Regulatory Credit Score Model

### **Possible Mapping Combinations** 35.3.2

One Credit Score Model in the source can be mapped only to one Regulatory Credit Score Model. One to Many or Many to Many mapping will lead to error in T2T as the records will be duplicated. The possible combinations for Credit Score Model to Regulatory Credit Score Model mapping are One to One and Many to One mappings.

### **Topics:**

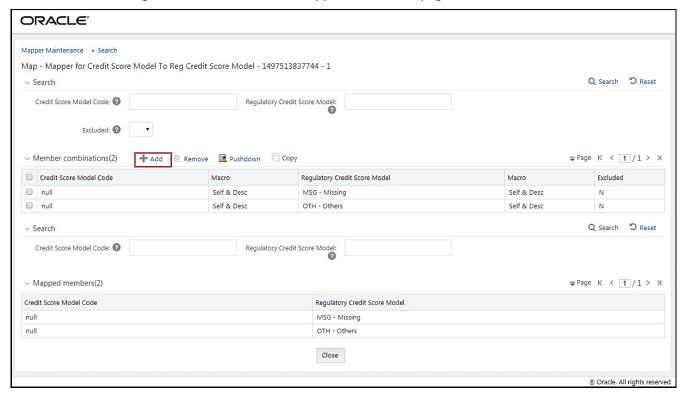
- One-to-One Mapping
- Many-to-One Mapping

## 35.3.2.1 One-to-One Mapping

One Credit Score Model can be mapped to one Regulatory Credit Score Model using the Mapper Maintenance screen. Here, you need to select one Credit Score Model and one Regulatory Credit Score Model. This means the corresponding data in Stage Account Credit Score Details Credit Score Model column for the selected Credit Score Model will be loaded into the Fact Account Credit Score Details Regulatory Credit Score Model column while loading the T2T.

1. In the Mapper Maintenance page, click Add.

Figure 138: Select Add in the Mapper Maintenance page



The Add Mappings page opens.

In this example, OTH - Others are mapped to FICO - FICO Score. To map, click **Go** and then to save the mapping, click **Save**.

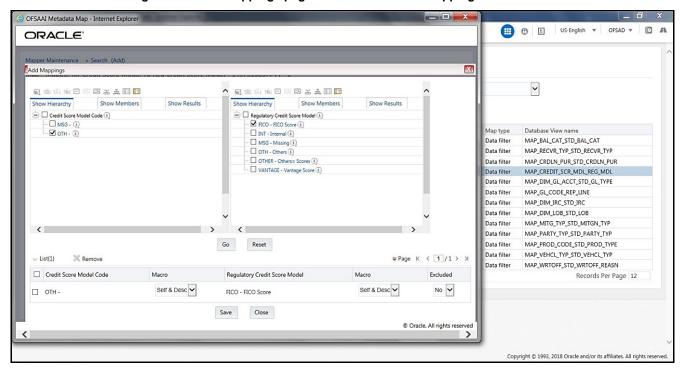
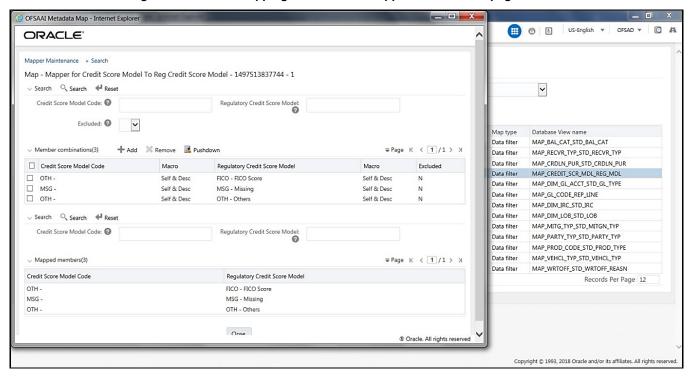


Figure 139: Add Mappings page for the One-to-One Mapping

- 3. An acknowledgment is displayed. Click Yes to confirm.
- **4.** The Mapped Members are displayed in the **Mapper Maintenance** page.

Figure 140: Added mappings listed in the Mapper Maintenance page

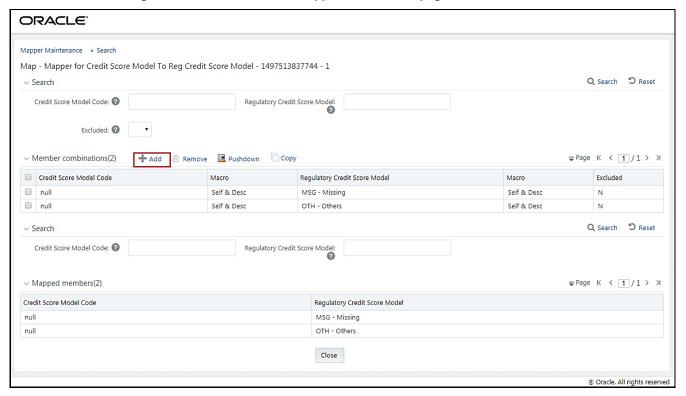


#### Many-to-One Mapping 35.3.2.2

Many Credit Score Models can be mapped to one Regulatory Credit Score Model using the Mapper Maintenance screen. Here, you need to select two or more Credit Score Models and one Regulatory Credit Score Model. This means the corresponding data in Stage Account Credit Score Details Credit Score Model column for the selected Credit Score Models will be loaded into the Fact Account Credit Score Details Regulatory Credit Score Model column while loading the T2T.

1. In the Mapper Maintenance page, click Add.

Figure 141: Select Add in the Mapper Maintenance page



2. The Add Mappings page opens. In this example, MSG – Missing, and OTH - Others are mapped to VANTAGE - Vantage Score. To map, click Go and then to save the mapping, click Save.

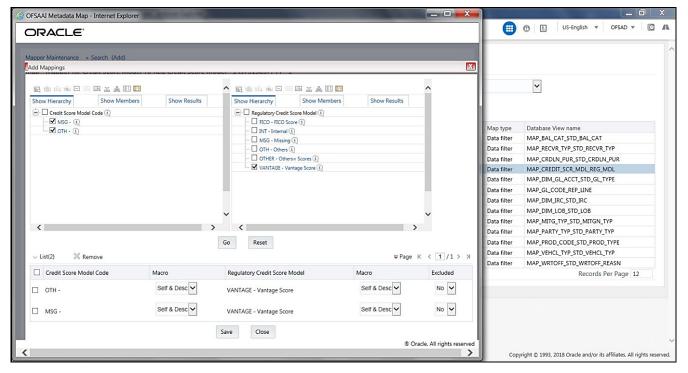
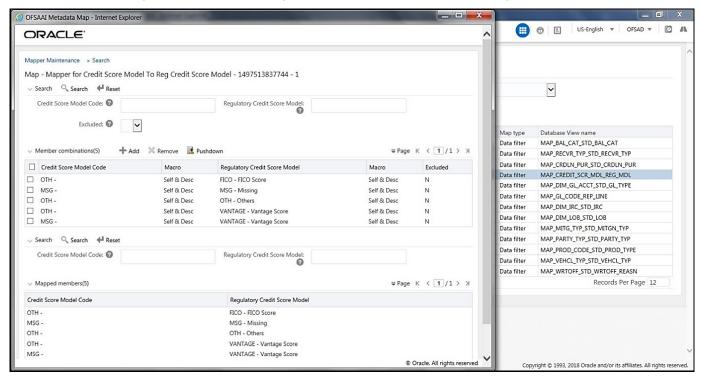


Figure 142: Add Mappings page for the Many-to-One Mapping

- 3. An acknowledgment is displayed. Click **Yes** to confirm.
- **4.** The Mapped Members are displayed in the **Mapper Maintenance** page.

Figure 143: Added mappings listed in the Mapper Maintenance page



## 35.4 Loading Mapper Maintenance through Backend

Load the MAP\_CREDIT\_SCR\_MDL\_REG\_MDL table in Atomic Schema with V\_MAP\_ID as 1497513837744, V\_MEMBER\_1 => Credit Score Model Code (values from

DIM\_CREDIT\_SCORE\_MODEL.V\_CREDIT\_SCORE\_MODEL\_CODE), V\_MEMBER\_2 => Regulatory

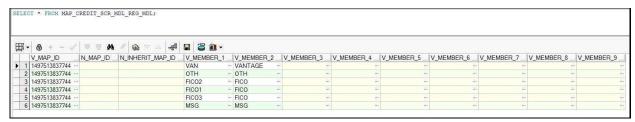
Credit Score Model Code (values from

DIM\_REG\_CREDIT\_SCORE\_MODEL.V\_REG\_CREDIT\_SCORE\_MODEL\_CODE).

**NOTE** 

These values are actual business key columns and not display codes.

Figure 144: Loading the Mapper Maintenance from backend



# 35.5 Deploying Credit Score Model and Probability of Default Model Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List</u> of <u>Unsupported T2Ts</u>

# 35.6 Populating Credit Score Model and Probability of Default Model T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. <u>Prerequisites for loading T2T</u>.

- **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Related Topics 35.**7

You can see the following topics related to other function-specific tables:

**Common Account Summary Tables** 

# **36 Other Miscellaneous Tables**

This section provides information about populating several other Results tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

### **Topics:**

- About Other Result T2Ts
- Deploying Other Result Tables on Hive
- Populating Other T2T Result Tables

Other Results tables store Party details related to fixed assets, spend obligations, and assets sold. These tables are used for the purpose of the financial report of the party or organization.

### **36.1** About Other Result T2Ts (Result T2Ts)

Other Result T2Ts and their description are given here.

Table 358: Other Result T2Ts and their description

T2T Name	T2T Description
T2T_FCT_ASSETS_SOLD	This T2T stores the data of assets sold over a period.
T2T_FCT_FIXED_ASSETS	This T2T stores the details pertaining to fixed assets such as real estate.
T2T_FCT_SPEND_OBLIGATIONS	This T2T stores the contract codes for purchase obligations such as long duration IT contract signed by Insurance companies or other spend obligations such as lease contracts.

The mapping details for the other Result T2Ts are given here.

Table 359: The mapping details for the other Result T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_ASSETS_SOLD	Stage Assets Sold	FCT_ASSETS_SOL D	Fact Assets Sold	T2T_FCT_ASSETS_SOLD
STG_FIXED_ASSETS_ DETAILS	Stage Fixed Assets Details	FCT_FIXED_ASSE TS	Fact Fixed Assets	T2T_FCT_FIXED_ASSET S
STG_SPEND_OBLIGA TIONS	Stage Spend Obligations	FCT_SPEND_OBLI GATIONS	Fact Spend Obligations	T2T_FCT_SPEND_OBLIG ATIONS

# **36.2** Deploying Other Result Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see List of Unsupported T2Ts.

#### 36.3 **Populating Other T2T Result Tables**

Follow this T2T process to populate data into any T2T Result table:

NOTE

Only RDBMS T2Ts can be executed using the PMF.

- 1. To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - **a.** Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- 2. To check the T2T execution status and verify the log files of any Result table, follow the procedure in the Verify the Run Execution section.
- **3.** To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

### **Transaction Summary Tables 3**7

This section provides information about Transaction Summary tables in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

### **Topics:**

- About Transaction Summary T2T (Result Table)
- **Deploying Transaction Summary Result Tables on Hive**
- Populating Transaction Summary T2T Result Tables
- **Related Topics**

The Fact Transaction Summary stores data from the stage transactions table for further operation reporting. The data is moved through a T2T process from stage to fact, which ensures that the stage data is available in a single table in the result area.

### **About Transaction Summary T2T (Result Table) 37.1**

Transaction Summary T2Ts and their description are given here.

Table 360: Transaction Summary T2Ts and their description

T2T Name	T2T Description	
T2T_STG_ANNUITY_TXNS_FTS	This T2T stores the details of annuity transactions.	
T2T_STG_CREDIT_DERIVATIVES_TXNS_FTS	This T2T stores the details of credit derivatives transactions.	
T2T_STG_FOREX_TXNS_FTS	This T2T stores the details of Forex account transactions.	
T2T_STG_FUTURES_TXNS_FTS	This T2T stores the details of futures contract transactions.	
T2T_STG_INVESTMENT_TXNS_FTS	This T2T stores the details of investment transactions.	
T2T_STG_LOAN_CONTRACT_TXNS_FTS	This T2T stores transactions that occurred on loan contracts.	
T2T_STG_MM_TXNS_FTS	This T2T stores details of money market transactions.	
T2T_STG_MUTUAL_FUNDS_TXNS_FTS	This T2T stores details of mutual fund transactions.	
T2T_STG_OPTION_CONTRACTS_TXNS_FTS	This T2T stores details of option contracts transactions.	
T2T_STG_RETIREMENT_ACCOUNTS_TXNS_FT S	This T2T stores the details of transactions that occurred on Retirement accounts.	
T2T_STG_SWAP_ACCOUNT_TXNS_FTS	This T2T stores the details of swap account transactions.	
T2T_STG_TRUSTS_TXNS_FTS	This T2T stores the details of transactions that occurred on trust accounts.	
T2T_STG_COMMODITIES_TXNS_FTS	This T2T stores the details of commodity transactions.	
T2T_STG_CUSTODIAN_ACCOUNT_TXNS_FTS	This T2T stores the details of transactions for a custodian account.	
T2T_STG_REPO_TRANSACTIONS_FTS	This T2T stores the details of repurchase and reverse repurchase transactions.	

T2T Name	T2T Description
T2T_STG_TRADING_ACCOUNT_TXNS_FTS	This T2T stores the details of transactions done on a trading account.

The mapping details for the Transaction Summary T2Ts are given here.

Table 361: The mapping details for the Transaction Summary T2Ts

Source Table Name	Logical Stage Table Name	Fact Table Name	Logical Fact Table Name	T2T Name
STG_ANNUITY_TXN	Stage Annuity	FCT_TRANSACTIO	Fact Annuity	T2T_STG_ANNUITY_TX
S	Transactions	N_SUMMARY	Transactions	NS_FTS
STG_CREDIT_DERIV ATIVES_TXNS	Stage Credit Derivatives Transactions	FCT_TRANSACTIO N_SUMMARY	Fact Transaction Summary	T2T_STG_CREDIT_DERI VATIVES_TXNS_FTS
STG_FOREX_TXNS	Stage Forex	FCT_TRANSACTIO	Fact Transaction	T2T_STG_FOREX_TXNS
	Transactions	N_SUMMARY	Summary	_FTS
STG_FUTURES_TXN	Stage Futures	FCT_TRANSACTIO	Fact Transaction	T2T_STG_FUTURES_TX
S	Transactions	N_SUMMARY	Summary	NS_FTS
STG_INVESTMENT_	Stage Investment	FCT_TRANSACTIO	Fact Transaction	T2T_STG_INVESTMEN
TXNS	Transactions	N_SUMMARY	Summary	T_TXNS_FTS
STG_LOAN_CONTR	Stage Loan Contract	FCT_TRANSACTIO	Fact Transaction	T2T_STG_LOAN_CONT
ACT_TXNS	Transactions	N_SUMMARY	Summary	RACT_TXNS_FTS
STG_MM_TXNS	Stage Money Market	FCT_TRANSACTIO	Fact Transaction	T2T_STG_MM_TXNS_F
	Transactions	N_SUMMARY	Summary	TS
STG_MUTUAL_FUN	Stage Mutual Funds	FCT_TRANSACTIO	Fact Transaction	T2T_STG_MUTUAL_FU
DS_TXNS	Transactions	N_SUMMARY	Summary	NDS_TXNS_FTS
STG_OPTION_CON TRACTS_TXNS	Stage Option Contracts Transactions	FCT_TRANSACTIO N_SUMMARY	Fact Transaction Summary	T2T_STG_OPTION_CO NTRACTS_TXNS_FTS
STG_RETIREMENT_ ACCOUNTS_TXNS	Stage Retirement Accounts Transactions	FCT_TRANSACTIO N_SUMMARY	Fact Transaction Summary	T2T_STG_RETIREMENT _ACCOUNTS_TXNS_FT S
STG_SWAP_ACCOU	Stage Swap Account	FCT_TRANSACTIO	Fact Transaction	T2T_STG_SWAP_ACCO
NT_TXNS	Transactions	N_SUMMARY	Summary	UNT_TXNS_FTS
STG_TRUSTS_TXNS	Stage Trusts	FCT_TRANSACTIO	Fact Transaction	T2T_STG_TRUSTS_TXN
	Transactions	N_SUMMARY	Summary	S_FTS
STG_COMMODITIES _TXNS	Stage Commodities	FCT_TRANSACTIO	Fact Transaction	T2T_STG_COMMODITI
	Transactions	N_SUMMARY	Summary	ES_TXNS_FTS
STG_CUSTODIAN_A CCOUNT_TXNS	Stage Custodian Account Transactions	FCT_TRANSACTIO N_SUMMARY	Fact Transaction Summary	T2T_STG_CUSTODIAN_ ACCOUNT_TXNS_FTS
STG_REPO_TRANS	Stage Reporting	FCT_TRANSACTIO	Fact Transaction	T2T_STG_REPO_TRAN
ACTIONS	Transactions	N_SUMMARY	Summary	SACTIONS_FTS

### 37.2 Deploying Transaction Summary Result Tables on Hive

All RDBMS related Result tables can also be deployed on Hive (Stage and Results). Deploy the Hive T2Ts using the Rules Run Framework. For more information, see the *Rules Run Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

**NOTE** 

In general, Stage and Result tables are also supported in Hive. However, there are some exceptions. For a list of tables that are not supported in Hive, see <u>List</u> of <u>Unsupported T2Ts</u>

# 37.3 Populating Transaction Summary T2T Result Tables

Follow this T2T process to populate data into any T2T Result table:

**NOTE** 

Only RDBMS T2Ts can be executed using the PMF.

- **1.** To populate data into any T2T Result table, execute the PMF process for that T2T. For a detailed procedure, see the following sections:
  - a. Prerequisites for loading T2T.
  - **b.** Select the Run Parameters and Execute the Run.
- **2.** To check the T2T execution status and verify the log files of any Result table, follow the procedure in the <u>Verify the Run Execution</u> section.
- 3. To check the error messages, if any, follow the procedure in the <a href="Check Error Messages">Check Error Messages</a> section.

# 37.4 Related Topics

You can see the following topics related to other function-specific tables:

Common Account Summary Tables

# 38 Big Data Implementation in OIDF

This section provides information about Big Data processing supported in the Oracle Insurance Data Foundation application.

### **Topics:**

- About Big Data in OIDF
- OIDF Big Data Architecture

### 38.1 About Big Data in OIDF

OIDF supports Big Data processing on HDFS (Hadoop Distributed File System) using Hive as Query Engine. The AAI application components such as SCD, H2H, and DQs provide equivalent Hive support. For more information, see OFS Analytical Applications Infrastructure User Guide.

# 38.2 OIDF Big Data Architecture

In Big Data processing, OIDF provides two types of deployment processes for Hive support. They are as follows:

- Staging and Results on Hive
- Staging on Hive and Results on RDBMS

This section consists of the following topics:

- Modifications
- Workarounds
- List of Supported SCDs and T2Ts
- <u>List of Unsupported SCDs</u>
- List of Unsupported T2Ts
- Executing Run through Rule Run Framework for Hive

### 38.2.1 About Staging and Results on Hive

In the Staging and Results on Hive deployment process, the Staging, and Results model elements are a part of Hive known as Hive Datadom. The config schema definitions used by AAI and certain metadata definitions that were part of Atomic schema now reside in an RDBMS schema known as Metadom. See the following architecture diagram for the representation of this deployment process.

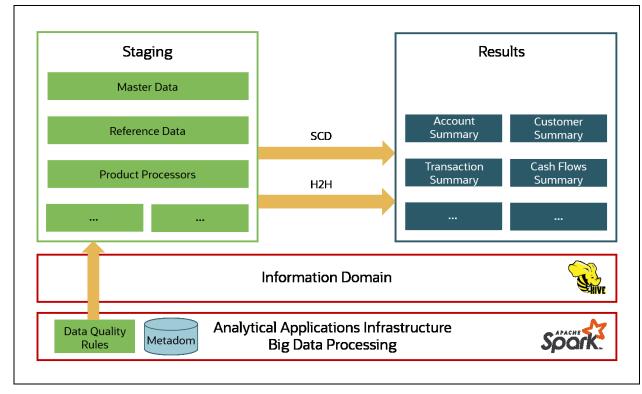


Figure 145: Data Foundation Big Data Architecture with Staging and Results on Hive

For the list of supported OIDF Hive Metadata definitions, see the Run Chart, SCD Metadata, and Technical Metadata (Staging Source) documents at My Oracle Support (MOS).

NOTE

Ensure that String values, which are null, must contain \n and then source to Hive stage tables.

#### **About Staging on Hive and Results on RDBMS** 38.2.2

In the Staging on Hive and Results on the RDBMS deployment process, the Staging occurs on Hive, known as Hive Datadom, and the Results model elements are a part of RDBMS, known as RDBMS Datadom. In this deployment process, additional software is required, which is Oracle Big Data SQL. Oracle Big Data SQL software resides on Hive and RDBMS Datadoms and enables the user to create a link to Hive Stage tables as external tables in RDBMS. This software manages the data representation of the Hive tables in RDBMS Datadom and can be accessed as external table objects. As a result, enables the use of RDBMS infrastructure components of SCD, T2T, and DQs. See the following architecture diagram for the representation of this deployment process.

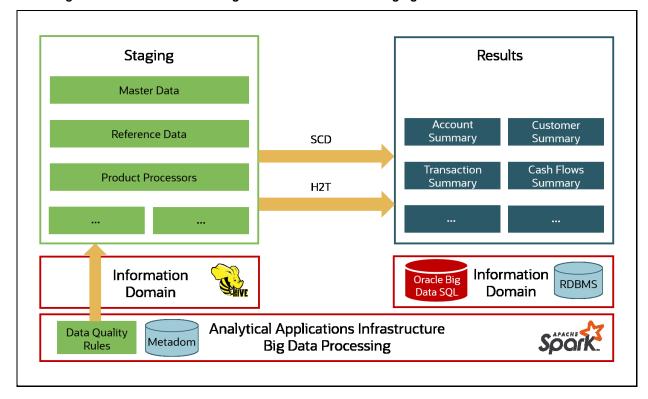


Figure 146: Data Foundation Big Data Architecture with Staging on Hive and Results on RDBMS

#### **Modifications** 38.2.3

Modifications in OIDF Hive (Staging and Results on Hive deployment process) compared to OIDF RDBMS are:

**Dim Dates Population** 

The Dim Dates functionality in Hive is similar to that of RDBMS. The difference exists in the date input format on the UI. In OIDF Hive, the Date Range input format is, an executable textbox contains .sh file name followed by the FROM and TO dates.

For example:

load-dimdates-run.sh, 20110101, 20110105

#### 38.2.4 Workarounds

The list of workarounds in OIDF Hive (Staging and Results on Hive deployment process) is:

The process of data access, modification, and representation is different in HDFS compared to that of RDBMS. Therefore, the mechanism for Data Protection also varies.

Workarounds:

**Data Redaction** 

The process of enabling Data Redaction for Hive can be performed using CDH Manager (Cloudera Distribution Hadoop Manager). For more information, see the section Sensitive Data Redaction in the Cloudera Security Guide.

Right to Forget

The Right to Forget feature enhancement is planned for future releases. However, prior to loading in the Hive instance, Anonymization of Party PII data can be done at the source. This process provides the flexibility to secure the PII information, and in addition, to drop the PII upon a request from the Party.

Mappers are supported using AMHM screens in OIDF (RDBMS). However, the development of the underlying functionality for the AMHM feature in the OIDF Hive is planned for future releases. Therefore, the Mappers will be supported during future releases.

### Workaround:

The Views defined on these Mappers in RDBMS are converted to Tables in Hive. Therefore, these Mappers must be loaded manually:

- MAP\_BAL\_CAT\_STD\_BAL\_CAT
- MAP\_CRDLN\_PUR\_STD\_CRDLN\_PUR
- MAP\_CRDLN\_TYP\_STD\_CRDLN\_TYP
- MAP\_CREDIT\_SCR\_MDL\_REG\_MDL
- MAP\_DIM\_GL\_ACCT\_STD\_GL\_TYPE
- MAP\_DIM\_IRC\_STD\_IRC
- MAP\_DIM\_LOB\_STD\_LOB
- MAP\_GL\_CODE\_REP\_LINE
- MAP\_MITG\_TYP\_STD\_MITGN\_TYP
- MAP\_PARTY\_TYP\_STD\_PARTY\_TYP
- MAP\_PROD\_CODE\_STD\_PROD\_TYPE
- MAP\_RECVR\_TYP\_STD\_RECVR\_TYP
- MAP\_VEHCL\_TYP\_STD\_VEHCL\_TYP
- MAP\_WRTOFF\_STD\_WRTOFF\_REASN

### **NOTE**

Hierarchies are supported using AMHM screens in OIDF (RDBMS). However, the development of the underlying functionality for the AMHM feature in the OIDF Hive is planned for future releases. As a result, the tables REV\_BIHIER and REV\_LOCALE\_HIER will be available in Hive, when the Hierarchies will be supported during future releases.

Data is not populated in the target table FSI\_INTRA\_COMPANY\_ACCOUNT.

### Workaround:

FSI\_REG\_LEGAL\_ENTITY\_HIER load references POP\_REG\_LE\_HIER DT, which is not supported in OIDF Hive. FSI\_REG\_LEGAL\_ENTITY\_HIER must be loaded to make use of the T2T for FSI\_REG\_LEGAL\_ENTITY\_HIER because that T2T consists of an inner join on FSI\_REG\_LEGAL\_ENTITY\_HIER.

Similarly, Dimension tables for Unsupported SCDs must be loaded to make use of the T2Ts that reference them.

In Hive, the exchange rates population for cross currencies is not being derived using exchange rates values for base currency.

Workaround:

Source the corresponding Exchange Rate value.

When performing Big Data installation for OIDF Hive, the following error is logged in the file OIDF installation.log:

Error: ORA-00942: table or view does not exist

ORA-06512: at "<Atomic\_Schema\_Name>.FSI\_CREATE\_SEQUENCE", line 6

Workaround:

This error can be ignored.

#### **List of Supported SCDs and T2Ts** 38.2.5

This section provides the list of supported SCDs and T2Ts for OIDF Hive (Staging and Results on Hive deployment process).

#### 38.2.5.1 List of Supported SCDs

The SCDs for Hive used in Data Foundation solutions are listed in the Oracle Insurance Data Foundation for Hive - SCD Metadata for Hive spreadsheet under Technical Metadata for OIDF HIVE 8.1.1.0.0.

#### 38.2.5.2 Run Enabled T2Ts

Deploy the OIDF Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0

#### 38.2.5.3 List of Supported T2Ts

The T2Ts for Hive used in Data Foundation solutions are listed in the Oracle Insurance Data Foundation for Hive - Technical Metadata (Staging Source) spreadsheet under Technical Metadata for OIDF HIVE 8.1.1.0.0.

#### **List of Unsupported SCDs** 38.2.6

- SCD-195
- SCD-196
- SCD-205
- SCD-208
- SCD-465
- SCD-411
- SCD-236

- SCD-237
- SCD-242
- SCD-248
- SCD-244
- SCD-336
- SCD-337
- SCD-378
- SCD-381
- SCD-335
- SCD-409
- SCD-419
- SCD-460
- SCD-332
- SCD-132

#### 38.2.7 **List of Unsupported T2Ts**

This is the list of unsupported T2Ts for OIDF Hive (Staging and Results on Hive deployment process):

- T2T\_FSI\_GL\_CODE\_REP\_LINE\_HIST
- T2T\_FCT\_PARTY\_EMPLOYMENT\_DETAILS
- T2T\_FCT\_PARTY\_EXAM\_DETAILS
- T2T\_FCT\_PARTY\_PD\_DETAILS
- T2T\_FCT\_PRDCR\_INS\_DISTRBTION\_DTLS
- T2T\_FCT\_PARTY\_MDCAL\_CONDITN\_DTL
- T2T\_FCT\_PARTY\_FAMILY\_MEDICAL\_DA
- T2T\_FCT\_COMMON\_CUSTOMER
- T2T\_FCT\_APPLICATION\_DOCUMENT
- T2T\_FCT\_APPLICNS\_DOC\_PRINT\_LOG
- T2T\_FCT\_PARTY\_INS\_POLICY\_ROLE\_MAP
- T2T\_FCT\_VEHICLE\_INSPECTION\_DETAILS
- T2T\_FCT\_VEHICLE\_DEVICE\_EVENT\_DTLS
- T2T\_FCT\_VEHICLE\_FLEET\_MAP
- T2T\_FCT\_ACCT\_CREDIT\_SCORE\_DETAILS
- T2T\_FCT\_CLAIM\_BREAK\_UP\_DETAILS
- T2T\_FPT\_STG\_ANNUITY\_TXNS
- T2T\_FPT\_STG\_HEALTH\_INS\_TXNS

- T2T\_FPT\_STG\_LIFE\_INS\_POLICY
- T2T\_FPT\_STG\_PROP\_CASU\_POLICY\_TXNS
- T2T\_FPT\_STG\_RETIREMENT\_ACCOUNTS\_TXNS
- T2T\_FCT\_POLICY\_TRANSACTIONS\_HLD
- T2T\_FCT\_POLICY\_TRANSACTIONS\_ISS
- T2T\_FCT\_INSURANCE\_MORTALITY
- FN\_POP\_REG\_LE\_HEIR
- T2T\_FSI\_EXCHANGE\_RATES
- T2T\_FSI\_EXCHANGE\_RATES\_FRWD
- T2T\_FCT\_PRODUCT\_RATE\_MATRIX
- T2T\_FCT\_TRIP\_DETAILS
- T2T\_FCT\_TRIP\_FLEET\_SUMMARY
- T2T\_FCT\_TRIP\_SUMMARY
- T2T\_FCT\_DRIVER\_BEHAVIOUR\_SUMMARY
- T2T\_FCT\_VEH\_PERFORMANCE\_SUMMARY
- T2T\_FCT\_INTRA\_COMPANY\_ACCT\_SU
- T2T\_FSI\_INTRA\_COMPANY\_POLICY
- T2T\_FCT\_FIXED\_ASSETS
- T2T\_FCT\_HEDGE\_PORTFL\_SET\_ACCT\_MAP
- T2T\_FLAS\_STG\_LOAN\_CONTRACTS
- T2T\_FCT\_FUND\_CIS\_COMPOSITION
- T2T\_FFSIS\_STG\_INVESTMENTS
- T2T\_FFSIS\_STG\_MANAGED\_INV\_ADV
- T2T\_FFSIS\_STG\_MUTUAL\_FUNDS
- T2T\_FFSIS\_STG\_TRUSTS
- T2T\_FFSIS\_STG\_CUSTODIAL\_ACCOUNTS
- T2T\_FCT\_LITIGATION\_DETAILS
- T2T\_FCT\_PAYMENTS\_SUMMARY
- T2T\_FCT\_ACCT\_RECOVERY\_DETAILS
- T2T\_FCT\_ACCT\_WRITE\_OFF\_DETAILS
- T2T\_FCT\_SPEND\_OBLIGATIONS
- T2T\_FCT\_CREDIT\_PARTCPN\_TRNCH\_DETL

### **Executing Run through Rule Run Framework for Hive** 38.2.8

Deploy the OIDF Hive T2Ts using the Rules Run Framework. For more information, see the Rules Run Framework section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

# 39 Metadata Browser

This chapter provides information about the Metadata Browser in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

### **Topics:**

- Overview
- Object View
- Metadata Publish
- Metadata Object to Application Map

### 39.1 Overview

Metadata Browser (MDB) with an Object and an Application view, provides a common repository of metadata objects created in Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) and Oracle Financial Services Analytical Applications (OFSAA) hosted in OFSAAI. Using this view, you can identify the usage of base objects in higher level objects and the mapping of Objects to Application. It enables traceability and impact analysis to the user. It also allows users to view the data flow and the work flow of the application and understand the usage of objects within the application.

The visualization of MDB supports Application view and Object view. In Application view, you can browse through the metadata created using the Applications hosted in OFSAAI. In object view, you can view the metadata created in OFSAAI.

### 39.2 Object View

Object view provides the detailed view of the Object. It comprises of basic details, detailed properties, dependencies, usage in higher level Object and Applications consuming the Metadata objects. Object view provides the option to navigate to its dependent or higher level usage objects. Object view enables the user to identify the usage and its dependencies across other objects.

Following are the steps to be followed to migrate the Objects to the metamodel structure: The Object view will provide the following areas in Financial Service Data Foundation:

- Data Foundation Metadata
- Target Data Model
- Data Mapping
- Data File Mapping
- Data Transformation
- Data Quality Rules
- Data Quality Groups
- Process Metadata
- Process

# 39.3 Metadata Publish

In order to publish the relevant metadata object to the metamodel structure, a seeded batch name <Infodom>MDB has to be executed.

Post successful publish, all the objects can be viewed in the Metadata browser. This step will need to done on regular basis to ensure that metamodel is in sync with underlying metadata.

# 39.4 Metadata Object to Application Map

To map all the objects the Financial Service Data Foundation application, a batch name <Infodom>\_ MDB\_OBJECT\_APPLN\_MAP has to be executed.

For complete information about the Metadata Browser, see the OFSAA Metadata Browser User Guide Release 8.1.0.0.0.

# 40 Recommendation for Backdated Run

This section provides information about performing a backdated Run in the Data Foundation application and step-by-step instructions to use this section.

There are scenarios that require Run executions for a prior date due to reasons such as, Backdated Regulatory Return Submission or Backdated Management Report Generation, etc.

### **Topics:**

- Overview of Backdated Run Execution
- Required Changes
- Recommendations
- Backdated Run Execution using Latest Record Indicator (LRI) batch

## 40.1 Overview of Backdated Run Execution

Backdated Run Execution is similar to any regular Run Execution in OIDF. You must reload or correct the data, which must be loaded for the given prior date. See the <u>OIDF Run Chart Release 8.1.1.0.0</u> and execute the relevant Batches/Runs for the required prior date.

### **40.2** Required Changes

The following are the prerequisites for Backdated Run Execution:

1. Handling Slowly Changing Dimensions (SCDs)

Ensure that all SCD executions for the given prior date or period is happened / completed with valid records in all the SCD dimensions. Record Start Date and Record End Date columns must have values.

2. Handling T2T Joins

By default, all out-of-the-box T2Ts have Joins with SCD dimensions using latest record indicator. This must be modified to pick the correct record using Record Start Date and Record End Date columns of SCD dimension.

### 40.3 Recommendations

Modifying T2T Joins using Record Start Date and Record End Date columns causes poor performance due to comparison of multiple dates in the query. The following are the recommendations:

- **1.** Copy the existing T2T definitions and modify the Joins to pick Record Start Date and Record End Date instead of latest record indicator.
- 2. Copy Record Start Date and Record End Date of the existing OIDF Process (under Run Rule Framework) which loads T2T and replace them with new T2T definitions changed above.
- 3. Whenever a backdated Run is required, modify the Run definition without changing the Run ID to pick the modified Process.

**NOTE** 

It is recommended to use this only when there is Backdated Run requirement. Any normal sequential days execution can be performed using out-of-the-box T2Ts and Runs as it results in better performance.

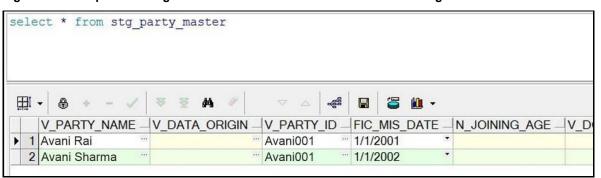
# 40.4 Backdated Run Execution using Latest Record Indicator (LRI) batch

A new Data Transformation batch UPDATE\_BACK\_DATED\_DIM\_LRI is created. This batch supports Backdated Run execution in the Latest Record Indicator (LRI) dimension table. The task in the UPDATE\_BACK\_DATED\_DIM\_LRI batch updates LRI Dimension Table for a given Dimension Table and for a given FIC\_MIS\_DATE. When this batch is triggered for a given FIC\_MIS\_DATE, the SKeys are updated with the new LRI flag value (F\_LATEST\_RECORD\_INDICATOR = Y/N).

To execute Backdated Run using LRI batch, follow these steps:

**1.** Add the required data records to their Master table and for the required FIC\_MIS\_DATE. For example, added two records to STG\_PARTY\_MASTER. The resultant image is shown below.

Figure 147: Sample of adding records for the backdated Run execution using LRI



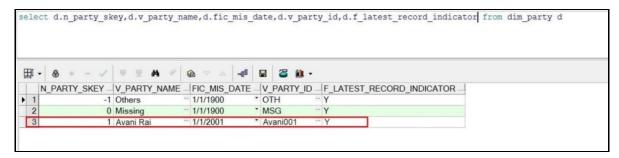
**NOTE** 

Ensure that V\_PARTY\_ID is same in this step and the LRI batch execution step.

2. Execute the SCD batch to add the required records from Master table to its Dimension table with the required FIC\_MIS\_DATEs. For example, execute SCD batch to add records from

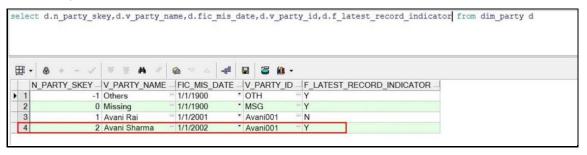
STG\_PARTY\_MASTER to DIM\_PARTY. The resultant data record in the DIM\_PARTY is as shown below:

Figure 148: Sample after executing the SCD batch for first record for the backdated Run execution using LRI



- After adding the first record to DIM\_PARTY for the FIC\_MIS\_DATE 1/1/2001, the flag F\_LATEST\_RECORD\_INDICATOR associated with this data record is set to Y.
- After adding the second record to DIM\_PARTY for the FIC\_MIS\_DATE 1/1/2002, the flag F\_LATEST\_RECORD\_INDICATOR associated with this data record is set to Y, and the flag

Figure 149: Sample after executing the SCD batch for the second record for the backdated Run execution using LRI



- F\_LATEST\_RECORD\_INDICATOR associated with the previous data record (with FIC\_MIS\_DATE 1/1/2001) is set to N automatically.
- 3. In Batch Maintenance, add a Task for the LRI Dimension table. In the Parameter List field, mention the Dimension table name ('DIM\_TABLE\_NAME') for which Backdated Run using LRI must be executed. In this example, 'DIM\_TABLE\_NAME' = 'DIM\_PARTY'.
- **4.** In the **Batch Execution** window, execute the UPDATE\_BACK\_DATED\_DIM\_LRI batch for different FIC\_MIS\_DATEs.

The following are the examples of data record after running the LRI batch with different FIC\_MIS\_DATEs:

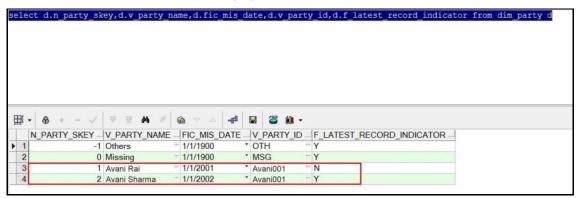
The image depicts execution of the UPDATE\_BACK\_DATED\_DIM\_LRI batch for a backdated record for its FIC\_MIS\_DATE. Therefore, this record is the Latest Record. In the following image, the LRI batch is executed for the data record with historical FIC\_MIS\_DATE 1/1/2001. Therefore, the flag F\_LATEST\_RECORD\_INDICATOR associated with FIC\_MIS\_DATE 1/1/2001 is set to Y. This data record is flagged as the Latest Record, and will be used as default by the system for all future transactions and processes.

elect d.n\_party\_skey,d.v\_party\_name,d.fic\_mis\_date,d.v\_party\_id,d.f\_latest\_record\_indicator from dim\_party\_d - / ¥ ¥ M -ef 🖫 1 N\_PARTY\_SKEY\_V\_PARTY\_NAME\_FIC\_MIS\_DATE\_V\_PARTY\_ID\_F\_LATEST\_RECORD\_INDICATOR -1 Others 1/1/1900 · OTH 0 Missing 1/1/1900 \* MSG Avani001 1 Avani Rai 1/1/2001 \* Avani001 2 Avani Sharma 1/1/2002

Figure 150: Sample data record after running the LRI batch with a different FIC\_MIS\_DATE

To change the default data selection, execute the UPDATE\_BACK\_DATED\_DIM\_LRI batch for the required data record for its FIC\_MIS\_DATE. In the following image, the batch is executed for the data record with FIC\_MIS\_DATE 1/1/2002. Therefore, the flag F\_LATEST\_RECORD\_INDICATOR associated with this FIC\_MIS\_DATE 1/1/2002 is set to Y and this data record is now flagged as the Latest Record. This record will be used as default by the system for all future transactions and processes. The flag F\_LATEST\_RECORD\_INDICATOR associated with the earlier default data record (with FIC\_MIS\_DATE 1/1/2001) is set automatically to N, indicating that the record with FIC\_MIS\_DATE 1/1/2001 is not the Latest Record anymore.

Figure 151: Sample data record after running again LRI batch with a different FIC\_MIS\_DATE



5. Monitor the status of the batch in the **Batch Monitor** screen.

#### **Compare Data Model Reports** 41

This chapter provides information about comparing Data Model Reports of two release versions in the Data Foundation application and step-by-step instructions to use this feature.

The first section gives you an understanding of the Data Model Report extracted from the erwin Data Modeler application. The Comparing Data Model Reports section details the steps to use the OFSAA application and download the Difference Report between two Data Model release versions.

### **Topics:**

- Creating the Data Model Report from erwin
- **Extracting Data Model Report from erwin**
- Compare Data Model Reports and Generate Data Model Difference Report

#### Creating the Data Model Report from erwin 41.1

You can create new Data Model Reports from the erwin Data Modeler application if there are no .eprs files to extract the information.

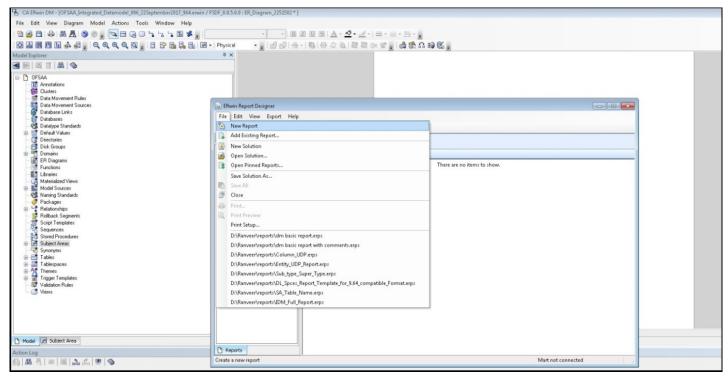
**NOTE** 

If the Data Model Reports are existing, see Extracting Data Model Report from erwin for more information.

To create the Data Model Report from the erwin Data Modeler application, follow these steps:

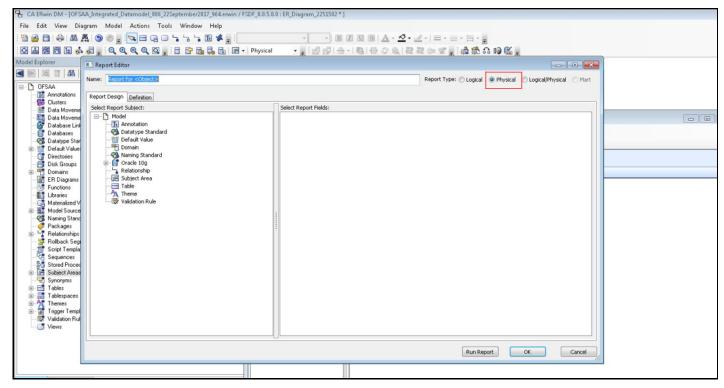
1. In the erwin **Report Designer** page, select **File**, select **New Report** (to create the .erps report file).

Figure 152: Select New Report in the erwin Report Designer page



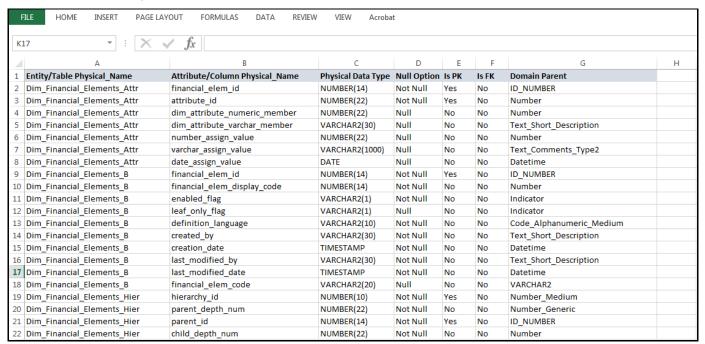
2. In the **Report Editor** page, select the Report Type as **Physical** and select the Report Subject as Table.

Figure 153: Select the report type and report subject in the Report Editor page



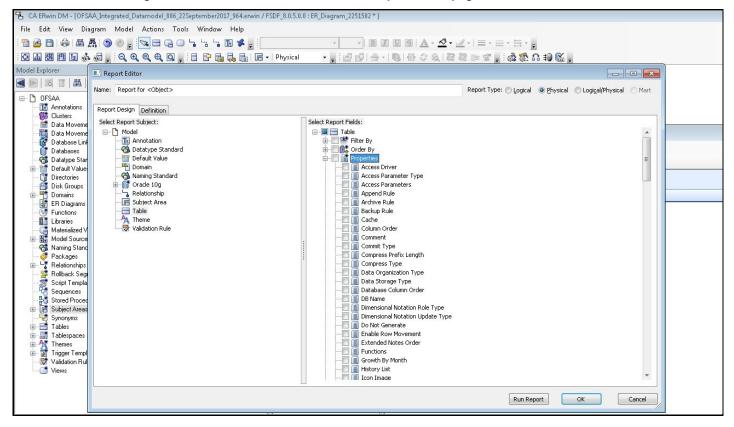
Select the **Report Fields** to match the sample Data Model Report shown as follows:

Figure 154: Select the Report Fields to match the sample Data Model Report



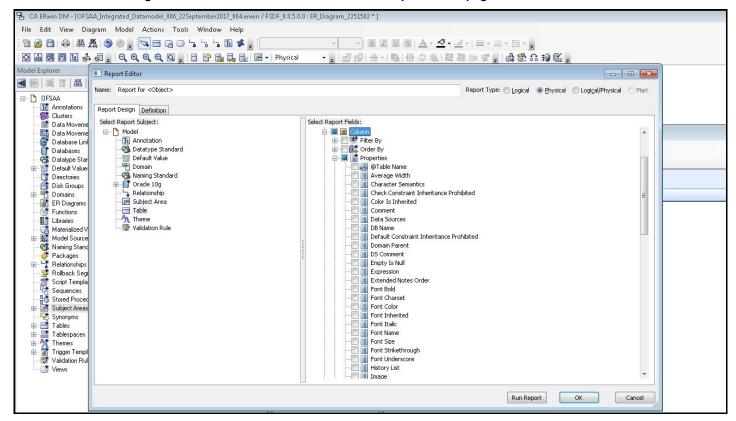
4. In the Report Editor page, in the Select Report Fields section, expand Table, expand Properties, and select Physical Name (Entity/Table Physical\_Name).

Figure 155: Select the Table details in the Report Editor page



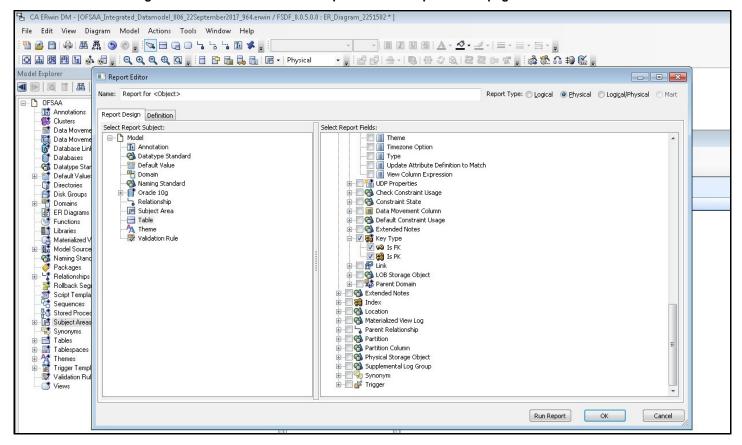
5. In the **Report Editor** page, in the Select Report Fields section, expand **Column**, expand **Properties**, select Physical Name (Attribute/Column Physical\_Name), Physical Data Type, Null Option, and **Domain Parent.** 

Figure 156: Select the Column details in the Report Editor page



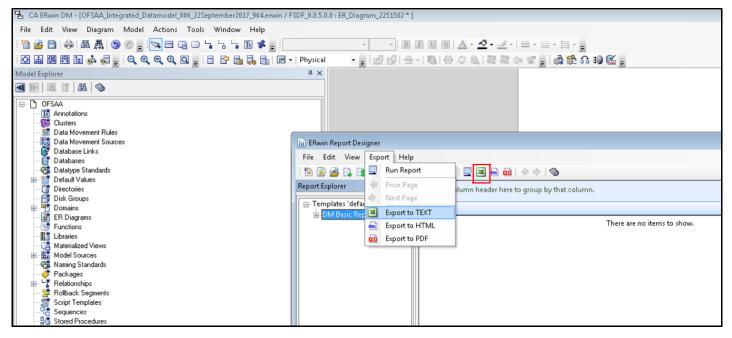
6. In the Report Editor page, in the Select Report Fields section, expand Table, expand Key Type, select Is PK, and Is FK. Click OK.

Figure 157: Select the PK and FK options in the Report Editor page



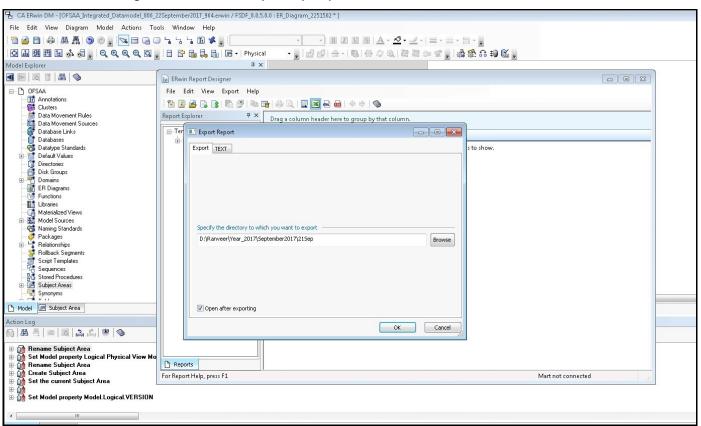
7. In the erwin Report Designer page, select Export, select Export to TEXT (Excel Format) or the Excel icon.

Figure 158: Select the report export option in the Report Editor page



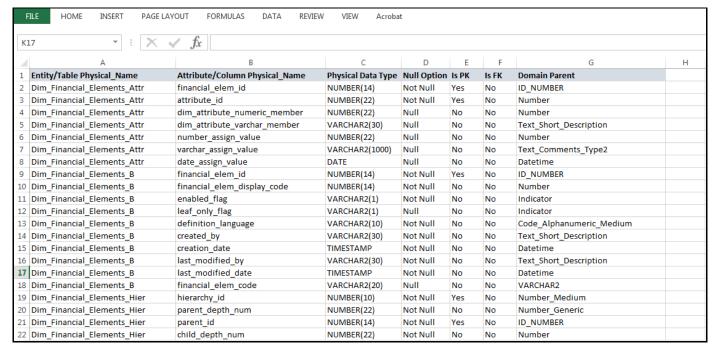
Enter or **Browse** the Export file path where you want to save the Data Model Report file.

Figure 159: Select the report export path



9. The generated Data Model Report file opens and must be in the following format.

Figure 160: Sample of the generated Data Model Report file



**NOTE** 

Ensure that the file is saved in .xlsx format.

#### **Extracting Data Model Report from erwin 41.2**

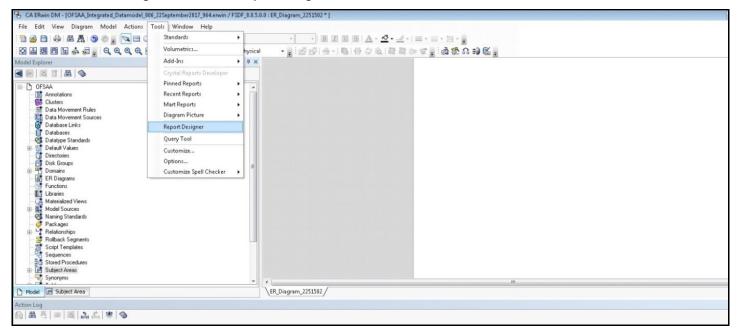
OIDF is a collection of data model artifacts delivered as erwin files or can be extracted as.XLS file from the erwin Data Modeler application. OIDF hence requires a license of the erwin Data Modeler application.

erwin is the current and only supported modeling tool to view and edit the model. Currently, the minimum version of erwin Data Modeler application supported is 2019R1 or a higher version.

To extract the Data Model Report from the erwin Data Modeler application, follow these steps:

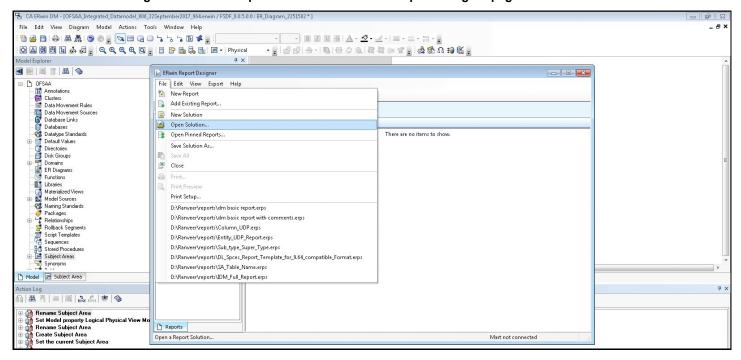
1. Open the Erwin Data Modeler application. Select the **Tools** menu and select the **Report Designer**.

Figure 161: Select Report Designer



2. In the erwin Report Designer page, select File, select Open Solution (to extract the .erps report

Figure 162: Select Open Solution in the erwin Report Designer page



**3.** Browse the path of the .erps file, select the file, and click **Open**.

CA ERwin DM - [OFSAA Integrated Datam odel 806 22September2017 964.erwin / FSDF 8.0.5.0.0 : ER Diagram 2251502\* File Edit View Diagram Model Actions Tools Window Help 11 2 11 4 A A 5 6 5 N A B A 5 - B Z V S A - 2 - 2 - 5 - 5 - 5 ② 📠 🕮 🔁 🖫 🗞 👼 🛒 🔍 🔍 🔍 🔍 🔍 📑 📑 🛗 👼 🖟 🙃 → Physical Model Explorer ERwin Report Designe - E X □ DFSAA J UTSAR
III Annotations
Clusters
J Data Movement Rules
Data Movement Sources
Database Links
Databases
Databyse Standards
Default Values lii Open × G → I + Computer + Data (D:) + Ranveer + reports + → ← Search reports ٥ Organize ▼ New folder # · | 🎉 Ranveer Name Date modified Type Size 📗 All apps SA S Datatype Standades

Default Values

Disk Groups

Disk Groups

Processing

Functions

E ER Disgrams

Materialized Views

Materialized Views

Naming Standards

Rollbock Segments

Script Templates

Sequences

Stoled Procedures

Stoled Frocedures

Stoled Frocedures

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Superioralized Views

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Views

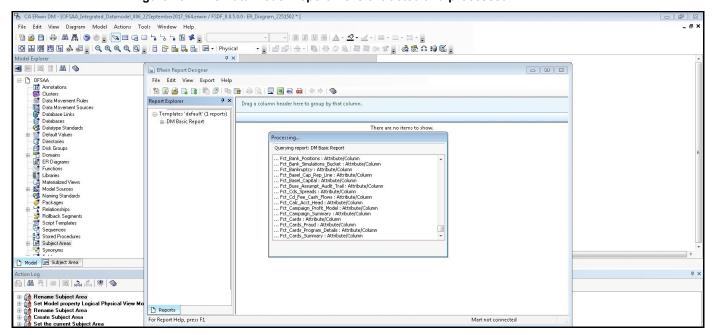
Superioralized Views

Vi 3/17/2017 4:17 PM Blank CR Temp Column\_UDP.erps 8/11/2017 2:57 PM ERPS File 1 KB ■ CRApp\_9.6 Default\_Value.erps 2/6/2017 5:25 PM ERPS File 1 KB FSDF\_XML 8/31/2017 4:53 PM ERPS File DL\_Spces\_Report\_Template\_for\_9.64\_co... 1 KB IDM 803 dm basic report with comments.erps 6/28/2016 10:22 AM 1 KB **№** IDM 810 dm basic report.erps 5/5/2016 12:27 PM ERPS File 1 KB Kartheek\_temp Domain &Datatype.erps 7/29/2016 9:41 PM Latest IDM Entity\_UDP\_Report.erps 7/27/2017 11:41 AM ERPS File Media\_Pack\_Slice\_8031 FK.erps 7/13/2016 10:29 AM FRPS File 1 KB Media\_Pack\_Slice\_80302 FK\_RoleName.erps 2/17/2017 6:31 PM ERPS File 1 KB New folder FSDF\_Report\_in\_Required\_Format.erps 1/16/2017 3:13 PM l reports IDM\_Full\_Report.erps 12/27/2016 4:57 PM ERPS File 1 KB Stored Proceds
Subject Areas
Synonyms Table SA Mapping SA.erps 4/11/2016 5:02 PM ERPS File 1 KB SA\_&\_SAComments.erps Wear 2017 SA\_Name.erps 4/20/2016 2:02 PM ERPS File 1 KB Model G Subject Area August2017 SA Table Name, erps 3/30/2016 3:58 PM **ERPS File** 1 KB July2017 Sub\_type\_Super\_Type.erps ERPS File 12/22/2016 12:39 ... 1 KB M June 2017 SubType\_SuperType.erps 12/22/2016 12:44 ... ERPS File 1 KB File name: dm basic report.erp: ▼ ERwin Report Solution Files (\*.e ▼ Set Model property Logical Physical View M Rename Subject Area Create Subject Area Set the current Subject Area Open Cancel

Figure 163: Browse and open the .erps file

4. The existing Data Model Report file is extracted and processed to export the file in the Excel format.

Figure 164: The Data Model Report file is extracted and processed



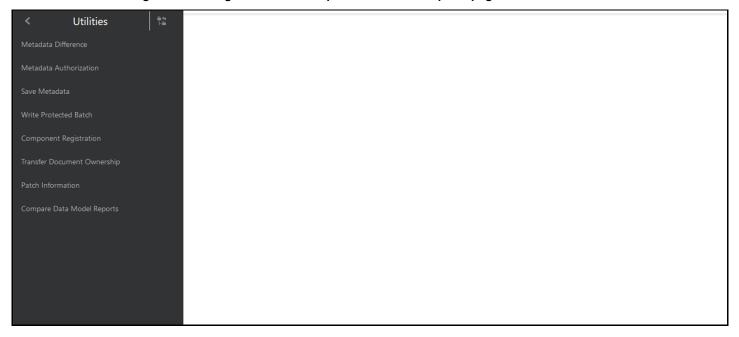
5. The generated Data Model Report file in the Excel format opens. Save the file in .xlsx format.

# 41.3 Compare Data Model Reports and Generate Data Model Difference Report

To extract the Data Model Report from the erwin Data Modeler application, follow these steps:

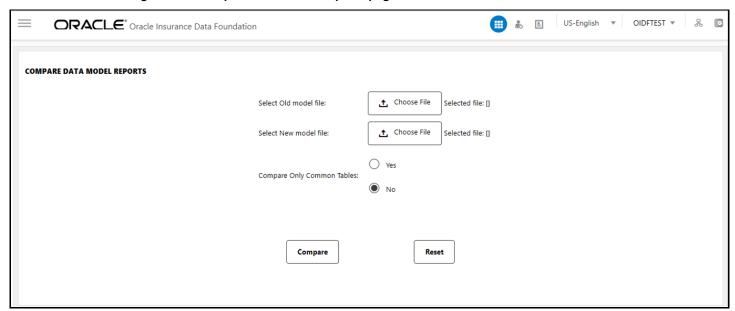
1. From **OFSAA Home**, select **Oracle Insurance Data Foundation**, select **Common Components**, select **Utilities**, and then select **Compare Data Model Reports**.

Figure 165: Navigation to the Compare Data Model Reports page



2. The Compare Data Model Reports page is displayed.

Figure 166: Compare Data Model Reports page



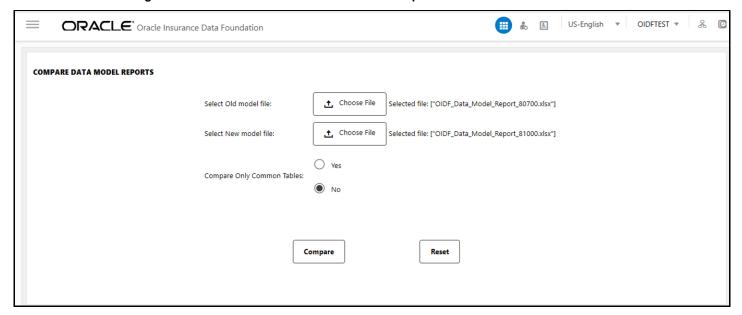
3. To browse and select the old data model report excel file, use **Choose File** associated with the **Select Old model file** label. To browse and select the new data model report excel file, use **Choose** 

File associated with the Select New model file label respectively. To select a different Data Model Report, click Reset.

**NOTE** 

The old data model report Excel file and new data model report Excel file must be in the same format and the file extension must be .xlsx.

Figure 167: Select the old and new data model reports



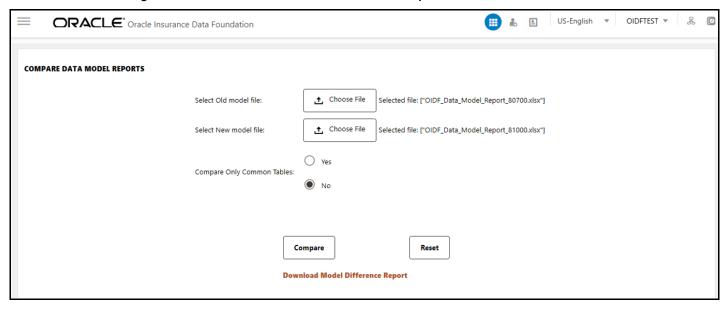
The **Compare Only Common Tables** option is **No** by default. Select **Yes** only if required.

NOTE

Compare Only Common Tables with option Yes is used when comparing the Data Model Report of different OFSAA applications. The Report field is different for each OFSAA application and only common fields are required for comparison.

**4.** To compare the old and new data model report, and generate the Data Model Difference Report, click **Compare**. The **Download Model Difference Report** link appears. To download the Data Model Difference Report, click the **Download Model Difference Report** link.

Figure 168: Generate the Data Model Difference Report



**5. Save** the file.

# **42** Data Quality Framework

This chapter provides information about Data Quality Rules Execution in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

### **Topics:**

- Data Quality Rules
- Data Quality Groups
- Data Quality Rules For Staging Tables
- Data Quality Groups for Staging Tables
- Batch Execution of DO Rules

Data Quality Framework consists of a scalable rule-based engine which uses a single-pass integration process to standardize, match, and duplicate information across global data. Data Quality Framework within the Infrastructure system facilitates you to define rules and execute them to query, validate, and correct the transformed data existing in an Information Domain.

You can access Data Quality Framework by expanding the Data Integrator Framework within the Unified Metadata Manager section in tree structure of LHS menu.

Data Quality Framework consists of the following sections:

- Data Quality Rules
- Data Quality Groups

**NOTE** 

For the latest information about Data Quality Framework, see the *Data Quality Framework* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

## **42.1** Data Quality Rules

Data Quality Rules allows you to create a DQ (Data Quality) definition and define specific validation checks based on Range, Data Length, Column Reference/Specific Value, List of Value/Code, Null Value, Blank Value, Referential Integrity, Duplicity, and Custom Check/Business. You can also correct data for range, column reference, list of values, null value, and blank value parameters. The defined Data Quality Rule checks can be logically grouped and executed together.

For the roles mapped to the Data Quality Rules, see the *Data Quality Rules* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

To navigate to the **Data Quality Rules** page, from **OFSAA Home**, select **Oracle Insurance Data Foundation**, select **Data Management Framework**, select **Data Quality Framework**, and then select **Data Quality Rules**. The **Data Quality Rules** page is displayed.

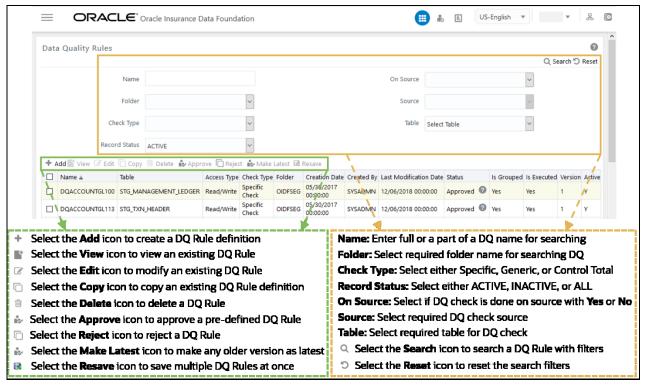


Figure 169: Data Quality Rules page

A defined rule is displayed in Saved status until it is Approved or Rejected by the approver. The approved rules can be grouped further for execution and the rejected rules are sent back to the user with the Approver comments.

You can Add, View, Modify, Copy, Approve or Reject, Resave, or Delete the Data Quality Rules within the Data Quality Rules page. You can make any version of a Data Quality Rule as latest. You can also search for a Data Quality Rule based on Name, Folder, Check Type, On Source, Source, Table, or Record Status (Active, Inactive, and All).

To perform different actions related to the Data Quality Rules, see the following sub-sections in the Data Quality Rules section of the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0:

- Creating a Data Quality Rule section to create a Data Quality Rule
- Viewing Data Quality Rule section to view an existing Data Quality Rule
- Modifying Data Quality Rule section to edit an existing Data Quality Rule
- Copying Data Quality Rule section to copy an existing Data Quality Rule details
- Deleting Data Quality Rule section to delete a Data Quality Rule
- Approving/Rejecting Data Quality Rule to approve a pre-defined DQ Rule or reject a DQ Rule
- Versioning and Make Latest Feature section to make any older version as latest
- Resaving Data Quality Rule section to save multiple Data Quality Rules simultaneously

To execute any Data Quality Rule, a Data Quality Group must be created and the rules for execution has to be mapped with this Data Quality Group. For more information, see the Executing Data Quality Group

section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

For the latest information about Data Quality Rules, see the Data Quality Rules section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

#### **Data Quality Groups 42.2**

Data Quality Groups facilitates you to logically group the defined DQ definitions and schedule for execution. DQ definitions can be executed either through Data Quality Groups page of Data Management Tools framework or in Batch Execution page of Operations module.

When a Data Quality Group is executed for processing, the details of the execution are captured in a log file.

For the roles mapped to the Data Quality Groups, see the Data Quality Groups section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

To navigate to the Data Quality Groups page, from OFSAA Home, select Oracle Insurance Data Foundation, select Data Management Framework, select Data Quality Framework, and then select **Data Quality Groups.** 

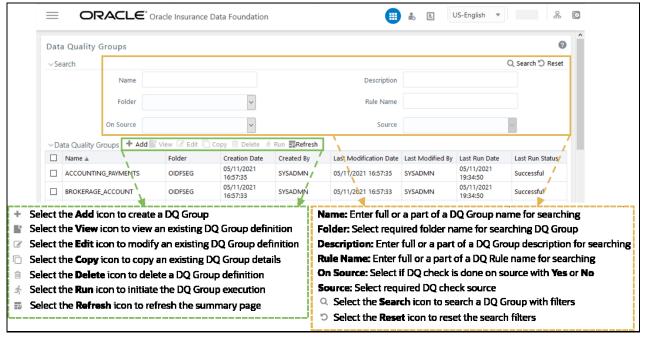


Figure 170: Data Quality Groups Page

The Data Quality Groups Page displays the list of pre-defined Data Quality Groups with the other details such as Name, Folder, Creation Date, Created By, Last Modification Date, Last Modified By, Last Run Date, and Last Run Status.

You can create and execute DQ Group definitions and View, Modify, Copy, Refresh, or Delete DQ Group definitions within the **Data Quality Groups** Page.

To perform different actions related to the Data Quality Groups, see the following sub-sections in the Data Quality Groups section of the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0:

- Creating Data Quality Group section to create a Data Quality Group
- Viewing Data Quality Group section to view an existing Data Quality Group
- Modifying Data Quality Group section to edit an existing Data Quality Group
- Copying Data Quality Group section to copy an existing Data Quality Group details
- Deleting Data Quality Group section to delete a Data Quality Group
- Executing Data Quality Group section to execute a Data Quality Group definition
- Viewing Data Quality Group Summary Log section to view the execution log details of Data Quality Rules
- Viewing Data Quality Report section to view the execution summary report of Data Quality Rules

For the latest information about Data Quality Groups, see the *Data Quality Groups* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

# **42.3** Data Quality Rules For Staging Tables

Data Quality (DQ) Rules are framed and created based on Staging Tables. Each rule is based on specified staging table column Specific Check or table Generic Check. The rules created for each of the tables are detailed in the DQ\_Check\_Rules spreadsheet.

In Specific Check, a particular column is checked based on rule's predefined checks, whereas in Generic Check any columns are not specified. Generic Check is useful if you have a check which is not Specific or you use IF-ELSE conditions or CASE statements.

US-English ▼ # ₺ 🖺 ORACLE\* Oracle Insurance Data Foundation Data Quality Rules Q Search ' Reset Name On Source Table Select Table Check Type Record Status ACTIVE 🛨 Add 🎬 View 🥒 Edit 🗀 Copy 🗎 Delete 🕏 Approve 🗋 Reject 🕏 Make Latest 🗟 Resave Access Type Check Type Folder Creation Date Created By Last Modification Date Status DQACCOUNTGL100 STG\_MANAGEMENT\_LEDGER Read/Write Specific Check OIDFSEG 05/30/2017 SYSADMN 12/06/2018 00:00:00 Approved 1 Yes Read/Write Specific Check OIDFSEG 05/30/2017 00:00:00 SYSADMN 12/06/2018 00:00:00 Approved Ves ☐ DOACCOUNTGL113 STG TXN HEADER Read/Write Specific Check 05/30/2017 OIDFSEG 00:00:00 SYSADMN 12/06/2018 00:00:00 Approved ② Yes □ DQACCOUNTGL114 STG\_TXN\_HEADER 05/30/2017 □ DQACCOUNTGL118 STG\_TXN HEADER OIDFSEG SYSADMN 12/06/2018 00:00:00 Approved ② Yes Read/Write Yes Check 00:00:00 Read/Write Specific Check OIDFSEG 05/30/2017 00:00:00 □ DQACCOUNTGL28 STG\_GL\_ACCOUNTS SYSADMN 12/06/2018 00:00:00 Approved Yes

Figure 171: Specified Data Quality Rules for the Staging tables

# **42.4** Data Quality Groups for Staging Tables

To execute any DQ Rule, a group must be created and the rules for execution has to be mapped with this group. For each staging table, a group has to be created and rules for these particular table have to be mapped under this group.

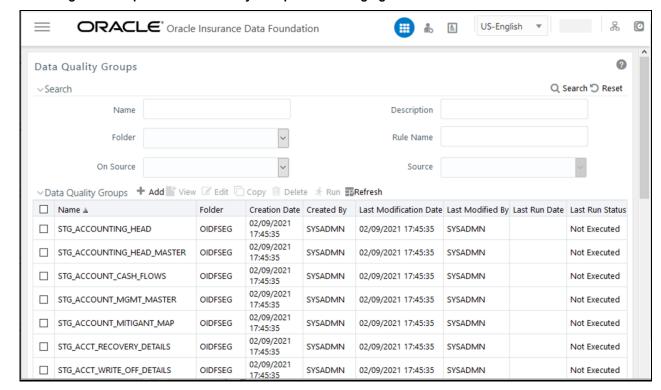


Figure 172: Specified Data Quality Groups for the Staging tables

For more information regarding Data Quality Group execution, see the *Executing Data Quality Group* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide</u> Release 8.1.1.0.0.

The DQ Group Mapping sheet of the Oracle Insurance Data Foundation Application Pack Runchart document of this release, which displays the total groups and corresponding Rules mapped to that group.

# **42.5** Batch Execution of DQ Rules

Create a Batch for executing DQ Rules and add a Task to the selected Batch. Add component as RUN DQ RULE and in Dynamic Parameter List, add a DQ Group.

A single Batch can have multiple number of Tasks and each Task is executing the DQ Group. Batch execution facilitates the execution of multiple DQ Groups, simultaneously.

You can also use the Include or Exclude functionality to determine which all groups have to be executed. The following batch needs to be executed in OIDF:

<INFODOM>\_DATA\_QUALITY\_BATCH\_OIDF

See the RUN\_CHART\_SUMMARY sheet of this release Runchart document of this release.

For more information about the Batch Execution, see the *Operations* section of the <u>Oracle Financial</u> Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

# 43 APPENDIX A: Naming Conventions Used in OIDF Data Model

This Appendix chapter explains the various naming conventions used in OIDF Logical Data Model and Physical Data Model. In addition, the domains in PDM is also listed with description.

#### Topic:

Naming Conventions Used in OIDF PDM

# 43.1 Naming Conventions Used in OIDF PDM

erwin Data Model consists of Logical and Physical data structures for each model file.

The following section explains the various naming conventions used in Oracle Insurance Data Foundation (OIDF) Logical Data Model (LDM) and Physical Data Model (PDM).

- OIDF Physical Data Model Naming Conventions
- Domains (PDM and LDM)

### 43.1.1 OIDF Physical Data Model Naming Conventions

The OIDF PDM consists of tables grouped into two distinct areas namely the Staging Area and Results Area. The Staging Area consists of tables for data sourcing and the Results Area consists of the star schemas / datamarts for reporting and Bl.

erwin Data Modeler application allows two views namely Logical view and Physical view for each model file. Accordingly, the OIDF PDM (Physical Data Model) file can be viewed in logical view mode and physical view mode. Different naming conventions and standards are applied to the two views of the OIDF Physical Data Model.

- PDM Logical View Mode Naming Conventions
- PDM Physical View Mode Naming Conventions

### 43.1.1.1 PDM Logical View Mode Naming Conventions

In the logical view model, OIDF PDM model tables and columns have descriptive names that readily convey the meaning and use of the element. In the logical view, names of tables and columns can have more than one word with the first letter of each word capitalized. Staging Area structures and Results Area structures have different name prefixes and suffixes as outlined in the following table.

PDM Area	Table Type	Prefix	Suffix	Example
Staging (Data Sourcing)	All Tables	Stage		Stage Reinsurance Contracts Held
	Transaction Tables		Transactions	Stage Reinsurance Issued Transactions

PDM Area	Table Type	Prefix	Suffix	Example
	Master Tables		Master	Stage Reinsurance Contract Type Master
Results (Datamart)	All Fact Tables	Fact		Fact Policy Transactions
	All Dimension Tables		Dimension	Reinsurance Contract Type Dimension

#### **PDM Physical View Mode Naming Conventions** 43.1.1.2

In the physical view model, OIDF PDM tables and columns may have abbreviated words joined by underscore character to form more meaningful and descriptive names. Table names in the physical view are capitalized.

Table 363: Prefixes and Suffixes for tables in the Physical View Mode of the Physical Data Model

PDM Area	Table Type	Prefix	Suffix	Example
Staging (Data Sourcing)	All Tables	STG_		STG_REINSURANCE_CONTRACT S_HELD
	Transaction Tables		_TXNS	STG_REINSURANCE_ISSUED_TX NS
	Master Tables		_MASTER	STG_RI_CONTRACT_TYPE_MAS TER
Results (Datamart)	All Fact Tables	FCT_		FCT_POLICY_TRANSACTIONS
	All Dimension Tables	DIM_		DIM_RI_CONTRACT_TYPE

The table below lists the prefix and/or suffix used for columns names in the physical view of the OIDF PDM. The prefix or suffix depends on the class and data type of the column.

Table 364: Column Name Prefix to indicate the Column Datatype

Column Data Type	Prefix
Varchar	V_
Number	N_
Date	D_
Flag	F_

Column name suffix for common classes of columns is in the following table.

Table 365: Column Name Suffix to indicate the Column Class

Column Class	Suffix
Method	_METHOD
Percentage	_PCT
Rate	_RATE
Balance	_BAL or _BALANCE
Amount	_AMT or _AMOUNT
Term	_TERM
Туре	_TYPE
Frequency	_FREQ

In addition, frequently occurring keywords in column names may be abbreviated as shown in the following table.

Table 366: Abbreviated the frequently occurring keywords in the column names

Name	Abbreviated Form
Accrual	accr
Account	acct
Accounting Currency	асу
Address	addr
Adjustment	adj
Advance	adv
Amount	amt
Application	арр
Average	avg
Balance	bal
Business	bus
Currency	ссу
Consolidation	cons
Customer	cust
Description	desc
Dimension	dim
Detail	dtl
Earnings at Risk	ear

Name	Abbreviated Form
End Of Period	еор
Error	err
Flag	flg
Frequency	freq
Future	fut
Forex	fx
Generation	gen
General Ledger	gl
Hierarchy	hier
History	hist
Local Currency	lcy
Line Of Business	lob
Maximum	max
Minimum	min
Mortgage	mort
Message	msg
Multiplier	mult
Number	num
Over Draft	od
Option	opt
Origination	org
Percent	pct
Payment	pmt
Prepayment	Ppmt
Product	prod
Source	src
Status	stat
Statistics	stats
Temporary	temp
Total	tot
Transaction	txn
Value at Risk	var
Value	val

#### **Domains (PDM and LDM) 43.1.2**

Domains are Logical data types that are attached to each column within the model. The following table lists the domains and their descriptions.

Table 367: Domains and their descriptions

Domain Name	Domain Description
Date	DATE
Timestamp	TIMESTAMP
Number	NUMBER(10)
Amount	NUMBER(22,3)
Code	NUMBER(5)
Flag	CHAR(1)
Frequency	NUMBER(5)
ID	VARCHAR2(25)
Percent	NUMBER(10,6)
Percent_Long	NUMBER(15,11)
Phone_Fax_Number	NUMBER(15)
Rate	NUMBER(10,6)
Term	NUMBER(5)
Alphanumeric_Code	VARCHAR2(10)
Name	VARCHAR2(60)
Currency_Code	VARCHAR2(3)
Short_Description	VARCHAR2(60)
Description	VARCHAR2(255)
Account_Number	VARCHAR2(25)
System_Identifier	NUMBER(20)
Long_Description	VARCHAR2(4000)

# **APPENDIX B: Standard Data Expectations**

This section provides information about the standard data expectations in the OIDF Application Pack.

# **44.1** Rate and Percentage

Data in the columns associated with the below-mentioned domains must be provided as a counting number (a whole number, which must not begin from 0).

- LONG\_RATE
- Rate
- RATE
- Short\_Rate
- RATE\_LONG
- Number\_Percentage
- Percent
- Percent\_Long

For example: If the interest rate is 8.9, then OIDF considers 8.9 as the value in the column instead of 0.089, because 0.089 is not valid as interest rate value.

#### **APPENDIX C: How to Define a Batch 45**

This Appendix provides information about How to Define a Batch in the Oracle Insurance Data Foundation application and step-by-step instructions to use this section.

#### **Topics:**

**Batch Definition** 

#### **Batch Definition** 45.1

To create a batch using the OFSAAI Batch Maintenance page, follow these steps:

- 1. From the **OFSAA Home**, select **Operations**, select **Batch Maintenance**.
- 2. In the Batch Maintenance page, Select the + button from the Batch Name toolbar. The New Batch **Definition** page is displayed.
- 3. Enter the Batch Definition details as tabulated.

Table 368: Batch Definition fields and their description

Field	Description	
Batch Name	The Batch Name is auto generated by the system. You can edit to specify a Batch name based on the following conditions:	
	The Batch Name must be unique across the Information Domain.	
	The Batch Name must be alphanumeric and should not start with a number. The Batch Name must not exceed 41 characters in length.	
	The Batch Name must not contain the special characters "." and "-".	
Batch Description	Enter a description for the Batch based on the Batch Name.	
Duplicate Batch	(Optional) Select the check box to create a new Batch by duplicating the existing Batch details.	
	On selection, the Batch ID field is enabled.	
Batch ID (If duplicate Batch is selected)	It is mandatory to specify the Batch ID if Duplicate Batch option is selected. Select the required Batch ID from the list.	
Sequential Batch	Select the check box if the Batch has to be created sequentially based on the task specified. For example, if there are 3 tasks defined in a Batch, task 3 should have precedence as task 2, and task 2 should have precedence as task 1.	

- 4. Click **Save** to save the Batch Definition details.
- The new Batch definition details are displayed in the Batch Name section of the Batch **Maintenance** page with the specified **Batch ID**.

# 46 APPENDIX D Reporting Code Description

This section provides the Reporting Code description used in the OFSAA Data Model.

# **46.1** Reporting Code Description

Table 369: The list of Reporting Codes and their description

Report Code	Report Name
BS-C1	Balance sheet
BS-C1B	Off-balance sheet items
BS-C1D	Assets and liabilities by currency
Country - K1	Activity by country
Cover - A1A	Premiums, claims & expenses - Annual
Cover - A1Q	Premiums, claims & expenses - Quarterly
OF - B1A (solo)	Own funds (annual template - for solo entities)
OF - B1A (group)	Own funds (annual template - for groups)
OF - B1Q (solo)	Own funds (quarterly template - for solo entities)
OF - B1Q (group)	Own funds (quarterly template - for groups)
VA - C2A	Summary analysis of changes in BOF
VA - C2B	Analysis of changes in BOF due to investments
VA - C2C	Analysis of changes in BOF due to technical provisions
VA - C2D	Analysis of changes in BOF due to its own debt and other items
SCR - B2A	Solvency capital requirement (for the undertaking on standard formula or partial internal models)
SCR - B2B	Solvency capital requirement (for undertakings on partial internal models)
SCR - B2C	Solvency capital requirement (for the undertaking on full internal models)
SCR - B3A	Solvency capital requirement - market risk
SCR - B3B	Solvency capital requirement - counterparty default risk
SCR - B3C	Solvency capital requirement - life underwriting risk
SCR - B3D	Solvency capital requirement - health underwriting risk
SCR - B3E	Solvency capital requirement - non-life underwriting risk
SCR - B3F	Solvency capital requirement - non-life catastrophe risk
SCR - B3G	Solvency capital requirement - operational risk
MCR - B4A	Minimum capital requirement (except for composite undertakings)
MCR - B4B	Minimum capital requirement (for composite undertakings)
Assets - D1	Investments Data - Portfolio list (detailed list of investments) - Annual

Report Code	Report Name
Assets - D1Q	Investments Data – Quarterly (Portfolio list or Quarterly summary)
Assets - D1S	Structured products Data - Portfolio list
Assets - D2O	Derivatives data – open positions
Assets - D2T	Derivatives data - historical derivatives trades
Assets - D3	Return on investment assets (by asset category)
Assets - D4	Investment funds (look-through approach)
Assets - D5	Securities lending and repos
Assets - D6	Assets held as collateral
TP - F1	Life and Health SLT Technical Provisions - Annual
TP - F1Q	Life and Health SLT Technical Provisions - Quarterly
TP - F2	Projection of future cash flows (Best Estimate - Life)
TP - F3	Life obligations analysis
TP - F3A	Only for Variable Annuities - Description of guarantees by product
TP - F3B	Only for Variable Annuities - Hedging of guarantees
TP - F4	Information on annuities stemming from Non-Life insurance obligations
TP - E1	Non-Life Technical Provisions - Annual
TP - E1Q	Non-Life Technical Provisions - Quarterly
TP - E2	Projection of future cash flows (Best Estimate - Non-life)
TP - E3	Non-life Insurance Claims Information
TP - E4	Movements of RBNS claims
TP - E6	Loss distribution profile non-life
TP - E7A	Underwriting risks (peak risks)
TP - E7B	Underwriting risks (mass risks)
Re - J1	Facultative covers non-life & life
Re - J2	Outgoing Reinsurance Program in the next reporting year
Re - J3	Share of reinsurers
Re - SPV	Special Purpose Insurance Vehicles
G01	Entities in the scope of the group
G03	(Re)insurance Solo requirements
G04	Non-(re)insurance Solo requirements
G14	Contribution to group TP
G20	Contribution to Group SCR with D&A
IGT1	IGT - Equity type transactions, debt & asset transfer
IGT2	IGT - Derivatives

Report Code	Report Name
IGT3	IGT - Internal Reinsurance
IGT4	IGT - Cost sharing, contingent liabilities, off BS items and other IGT
RC	Risk Concentration

#### APPENDIX E **Template to Generate Data** 47 Dictionary and Download Specification for erwin Data Modeler 2019R1 or a higher version

OFSAA data models for this release have been designed and released on 2019R1 or a higher version of erwin Data Modeler application. However, if there is a requirement to upgrade to the latest version of erwin (2019R1 or a higher version series), the existing procedure to generate DL specification using the published report templates fails in the lower version. This is because of architectural changes between the two erwin versions. This chapter provides information about the procedure to generate data dictionary and download specification for erwin Data Modeler application 2019R1 or a higher version, for all OFSAA data models qualified on OIDF 8.1.1.0.0.

For the compatible version of the erwin Data Modeler with this OIDF Application Pack release, see the Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.1.0.0.

The prerequisite is Upgrade the Data Model to 2019R1 or a higher version series before initiating generation of the DL specification.

Download the excel based template OFSAA Data Model Dictionary Template.xls and follow the steps mentioned below. This template is compatible with all the OFSAA data models that are qualified with OIDF version 8.1.1.0.0 and erwin Data Modeler application 2019R1 or a higher version.

- 1. Ensure that the erwin Data Modeler version is erwin 2019R1 or a higher version.
- **2.** Ensure that macros are enabled in this excel before execution.
- 3. Open the OFSAA Data Model in erwin Data Modeler application 2019R1 or a higher version before executing this template.
- 4. Click **UDP selection Menu** to launch the **UDP Selection** form.
- **5.** Select the correct application UDPs (optional).
- 6. Click Generate Report.
- On successful execution, the following message is displayed: Report generation is Complete.
- The download specification and the data dictionary report are available in the OIDF Download Specifications document in "OFSAA\_Download\_Spec" worksheet.

NOTE

To generate report for two application UDPs such as "BASEL\_III\_USA\_ADVNCD" and "OR", you need to manually remove the extra characters from the UDP name in the data model else the execution throws an error.

# 48 APPENDIX F About OIDF Documents

This section contains information about the OIDF Application Pack documentation resources.

The following are the types of available document resources:

- Product documents
- <u>Technical documents</u>

### **48.1** Product Documents

This resource consists of the product and data model end-user documents containing the functional, installation, and release details. The document types are as follows:

#### • User Guide:

This document provides functional information about the features and components in the OIDF application pack including the OIDF data model. The following information is explained in detail:

- OIDF Architecture and data model
- OIDF Subject Areas
- How to use OIDF
- Data Domain Browser (DDB) implementation in OIDF
- Mandatory Dimensions, T2T and SCD processes and execution, and loading multiple load Runs.
- Executing OIDF processes using Process Modelling Framework (PMF), prior dated (backdated) processing using the Restatement Support feature, Metadata Browser, and the process of comparing the data model reports.
- T2T and SCD metadata and the mapping related to Party, Product, Underwriting, Insurance Contracts, Telematics, Pandemic Data, Common Account Summary, Loan Account Summary, Transactions, General Ledger Data and Management Reporting, Insurance Claims, Actuarial, Common Account Summary, Credit Score Model and Probability of Default Model, and other tables.
- Big Data implementation in OIDF
- Data Quality Rules execution

#### Installation and Configuration Guide:

This document provides the prerequisites, installer, and data model patches, configuration, installation, and deployment information related to the OIDF application pack for both the fresh installation and upgrade installation scenarios. This document also contains detailed Big Data modes of installation and configuration information.

#### • Release Notes:

This document provides OIDF application pack release related information. The release related information contains details about the release installer and data model patches, prerequisites, new features and enhancements, bug fixes, any known issues or limitations, and workarounds.

#### Data Model documents:

The following are the OIDF data model documents:

#### OFSAA Data Model Extension Guidelines Document:

This document provides information about the extension process of the OFSAA data model and a sample, usage, and functions performed by each area of the model, the modelling methodology employed in each of the functional areas representing the usage pattern, data model structure, data model life cycle process, design guidelines for the staging, processing and reporting areas, configuring Entity UDPs for Application Data Interface of Data Integration Hub, creating the Subtype and Supertype relationship between two entities, deploying SQL Data Modeler configuration files and generating customized data model, data model merge guidelines and build guidelines.

#### OFSAA Data Model Naming Standards Guide:

This document provides details of the naming standards followed in the development process of the OFSAA data model for the tables, columns, PK and FK, keywords and domains information, table UDP and column UDP information.

#### • Data Protection Implementation Guide:

This document provides GDPR related data protection methods implemented in the OFSAA applications such as Data Redaction, Right to be Forgotten, Data Portability, Pseudonymization, Notice and Consent, and Data Archival.

#### • Cloning Reference Guide:

This document provides detailed steps to set up an OFSAA Instance Clone for the 8.1.x.x.x and 8.0.x.x.x releases in a faster and effective approach for further project developments. This document contains the approach to set up the OFSAA instances that are exact copies of the current OFSAA instance.

#### Security Guide:

This document contains information about the security parameters configuration provided by Oracle Financial Services Analytical Applications (OFSAA) and how to set it after the installation of the OIDF Application Pack.

You can download the OIDF Application Pack Release 8.1.x.x.x User Guide, Installation and Configuration Guide, Release Notes documents from the OHC Documentation Library.

You can download the OIDF Application Pack Release 8.1.x.x.x Data Model documents, Data Protection Implementation Guide, Cloning Reference Guide, and Security Guide from the OHC Documentation Library.

You can download the OIDF Application Pack Release 8.0.x.x.x Cloning Reference Guide from the OHC Documentation Library.

# **48.2** Technical Documents

This resource consists of the product and data model documents containing the technical details required for installing, upgrading and using the OIDF Application Pack, analyzing and using the data model, implementing data security, analyzing the technical metadata changes between the current release and the previous release. The document types are as follows:

#### • Data Model Difference Report:

This document consists of the changes between the current release version and the previous release versions of the data models. The details such as new tables and columns, dropped tables and columns, data type change, not Null change, domain change, PK and FK changes, and default value change are included in this document.

#### **Run Chart:**

This document consists of the following technical information required to set up, implement, and use the OIDF Application Pack:

- Technical metadata batches and Run processes
- Seeded data related table names, data load mode, seeded data type
- Data Quality Rules and Data Quality Rule Groups
- Dimension data loading
- **Exchange Rates loading**
- Mapper loading
- Source Run data load processes
- Execution Run data load processes

#### Changelog:

This document consists of the technical metadata changes between the current release and the previous release of the OIDF Application Pack, which is required for analysis before proceeding with the implementation process.

#### SCD Metadata:

This document consists of the SCD metadata technical details such as SCD map reference number, Dimension table, and column names and their corresponding Stage table and column names, column type and data type, and SCD type ID.

#### **T2T Metadata:**

This document consists of the T2T metadata technical details such as T2T name, Join and Filter conditions, source table and column names and corresponding target table and column names, and Expression.

#### **Download Specifications Documents:**

This document consists of the mapping from the Staging Data Model and provides an efficient way to manage the sourcing of data into the OIDF staging area. This document consists of the details of mapping the staging model at a column level to use cases. This mapping information is embedded in erwin at a column level using metadata called User Defined Properties (UDPs).

#### **PII Datasheet:**

This document consists of the Personally Identifiable Information (PII) dependent tables and columns on which the Data Redaction is applied in the current release of the OIDF Application Pack.

#### **Upgrade Guide:**

The document provides the approach for the upgrade of the OIDF Application Pack from the 8.0.x release versions to the v8.1 release containing the OOTB data model. Here, OIDF manages OFSAA common data model and associated metadata. This document consists of the different stages of the upgrade process, the assumptions made for the upgrade process, and the data and metadata

approach. A utility, called the ModelUpgrade is introduced in the OIDF Application Pack Release v8.1.0.0.0 to enable the upgrade installation using Incremental model upload. Using this utility, you can execute the packaged Prescripts before the upgrade and the Postscripts after the upgrade to handle the data and metadata.

#### • OFSAA Licensing Information User Manual:

This is the Licensing Information document, which is a part of the product or program documentation under the terms of your Oracle license agreement and is intended to help you understand the program editions, entitlements, restrictions, prerequisites, special license rights, and (or) separately licensed third-party technology terms associated with the Oracle software program(s) covered by this document.

You can download the OIDF Application Pack Release 8.1.x.x.x technical documents from the My Oracle Support (MOS) Doc IDs <u>2099161.1</u> and <u>2197857.1</u>.

# **OFSAA Support**

Raise a Service Request (SR) in My Oracle Support (MOS) for queries related to OFSAA applications.

### **Send Us Your Comments**

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