Oracle® Financial Services Channel Analytics

User Guide

Release 6

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Preface

Intended Audience

Welcome to Release 6 of the *Oracle Financial Services Channel Analytics User Guide.*

See Related Information Sources on page viii for more Oracle product information.

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Structure

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). Time dimension makes it possible to report the balances by Year, Quarter, or Month using the rollup functionality of cubes. Cubes makes it possible to rollup the monthly balances to a quarter and then to a year level. For example, the monthly data for January, February and March gets rolled up to Quarter 1 and the Quarter 1, 2, 3 and 4 data get rolled up to, say Year 2011. 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 is used to specify how to rollup the child member balances (for example, 3 month rolling average).

5 Account Dimension Population

6 Exchange Rate History Population

7 Account Summary Population

Account Summary tables are loaded from the staging product processor tables using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

8 Customer Summary Population

This chapter explains the process flow for populating Fact Common Customer Summary table.

9 Fact Data Population

10 Cube Build Process

11 Overview of OFSCA Reports

A How to Add a New Dimension

B How to Add a New Measure

C How to Develop a New Cube

D How to Define a Batch

Related Information Sources

Oracle Financial Services Institutional Performance Analytics (OFSIPA) User Guide

Oracle Financial Services Retail Customer Analytics (OFSRCA) User Guide

Oracle Financial Services Retail Performance Analytics (OFSRPA) User Guide

1

Introduction

Overview of Oracle Financial Services Channel Analytics (OFSCA)

Oracle Financial Services Channel Analytics (OFSCA) is a complete end-to-end web-based Business Intelligence solution for Customer Analytics.

It provides tools for data integration and includes customizable, pre-built dashboards and reports, a reporting data model, and user friendly functional subject areas for ad-hoc reporting.

The OFSCA solution is built using:

- OFSAA Infrastructure 7.3 for ETL and Data Integration
- OBIEE 11.1.1.6.1 for Dashboard & Reports activities
- Essbase 11.1.2.2 for multi-dimensional cube storage

This manual deals with essential Oracle Financial Services Analytical Applications (OFSAA) Infrastructure required for OFSCA activities, process flow for the data transformation and cube building processes, and functional details about the dash boards and reports. In addition, it includes subject areas which could be used for ad-hoc reporting using OBIEE Answers tool.

2

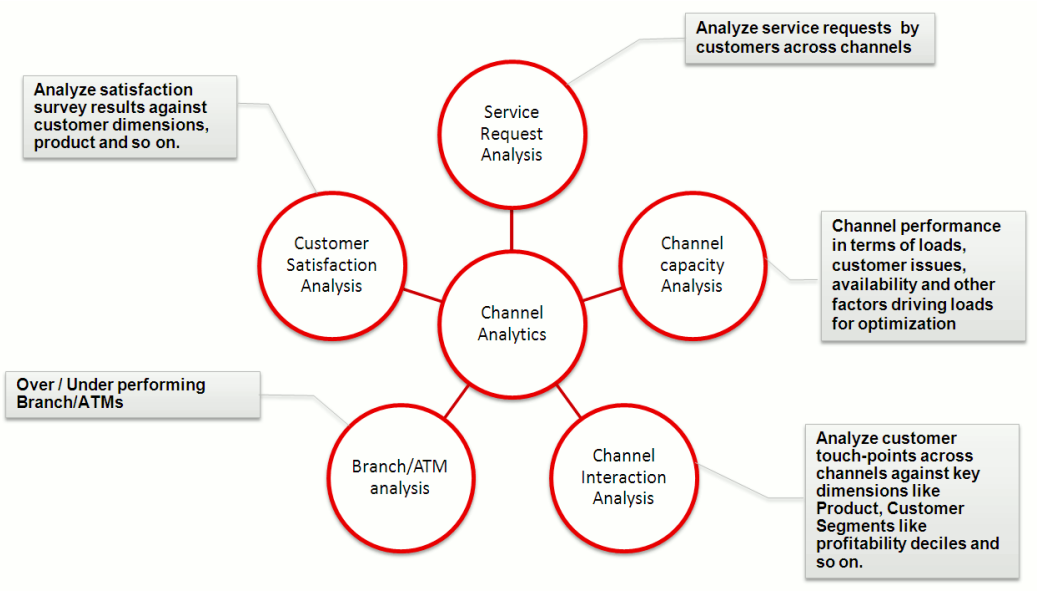
Overview of Process Flow

Introduction

Oracle Financial Services Channel Analytics (OFSCA) 6.0 utilizes OBIEE technology to present:

- Channel performance and Operational metrics to optimize channel capacity such as transaction loads on ATM, Branch, Call center, Chat, and so on.
- Branch transaction analysis.
- ATM/POS (Point of Sale) transaction analysis.
- Understand any customer skews happening in channel preferences, which have affinity to most profitable segment of certain channels.
- Understanding increased frequency of touch-points in specific customer segments and so on.
- Cross-channel performance analysis (like customer preferences for specific channels for different transactions) to enable migration to self-servicing on low-cost channels.
- Optimize Channel Investments to ensure high customer satisfaction and hence achieve long term engagement with the customer.
- Enable operation efficiencies and optimal customer experience with a deep understanding of the multi-channel interactions of the customer and related performance.

Following explains the product objectives of OFSCA 6.0:



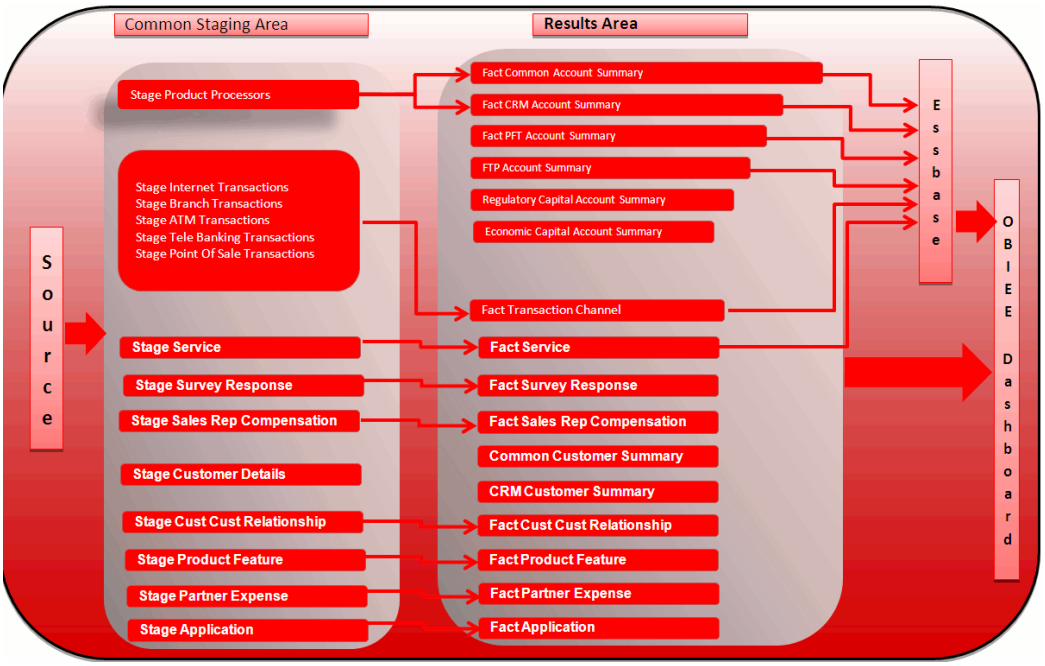
For details on OFSCA reports and how OBIEE is being utilized, refer to Overview of OFSCA Reports, page 11-1.

OFSCA is designed for OBIEE reading data from relational database. The relational database comprises of various dimensions and facts in the BI data model. OFSCA is also designed for OBIEE reading data from Essbase cubes, which stores aggregated data. The Essbase cubes are built from the fact data of the BI data model.

OFSCA 6.0 can be independently licensed and installed to work on top of the OFSAAI 7.3 Infrastructure.

Data Flow

Channel Analytics data model contains the staging tables from which data is loaded in to the dimensions and fact tables. Staging tables include the master staging tables, detail staging tables, staging product processor tables, and so on. The user needs to populate data into these staging tables.



Dimension Data Flow

Dimension data in OFSCA application is loaded from staging master tables using the Slowly Changing Dimensions (SCD) process. Data from source systems can be loaded into staging through flat file or source system interfaces. SCD process tracks the changes in the dimensional attributes and loads data into dimension tables. Examples of dimension tables that follow the SCD process are Product, Customer Type, Customer, Campaign, and so on.

Some dimensions are static or maintained internally within the application and are not expected as a download from source system (for example, Reporting Line). These dimensions are maintained through the AMHM (Attribute Member Hierarchy Maintenance) component of OFSAAI or through other framework components like DEFI.

Following are the list of Dimensions used in OFSCA:

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Account Status Dimension	Stage Account Status Master	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Application Reject Reasons Dimension	Stage Application Reject Reason Master	SCD
Application Status Dimension	Stage Application Status Master	SCD
Application Type Dimension	Stage Application Type Master	SCD
Attrition Dimension	Stage Attrition Reason Master	SCD
Authorization Decision Reasons Dimension	Stage Auth Decision Reason Master	SCD
Card Type Dimension	Stage Card Type Master	SCD
Channel Transaction Dimension	Stage Transaction Channel Type Master	SCD
Country Dimension	Stage Country Master	SCD
Credit Center Dimension	Stage Credit Center Master	SCD
Credit Officer Dimension	Stage Credit Officer Master	SCD
Customer Dimension	Stage Customer Master	SCD
Customer Type Dimension	Stage Customer Type Master	SCD
Decision Status Dimension	Stage Decision Status Master	SCD
Deviation Reasons Dimension	Stage Deviation Reason Master	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Education Dimension	Stage Customer Education Master	SCD
Geography Dimension	Stage Geography Master	SCD
Home Ownership Dimension	Stage Home Ownership Master	SCD
Household Dimension	Stage Household Master	SCD
Industry Dimension	Stage Industry Master	SCD
Issuer Dimension	Stage Issuer Master	SCD
Loan Product Category Dimension	Stage Product Category Master	SCD
LoB Dimension	Stage LOB Master	SCD
Management Dimension	Stage Account Mgmt Master	SCD
Merchant Category Dimension	Stage Merchant Category Master	SCD
Merchant Dimension	Stage Merchant Master	SCD
Migration Reasons Dimension	Stage Migration Reason Master	SCD
Offer Dimension	Stage Offer Master	SCD
Organization Structure Dimension	Stage Organization Structure Dimension	SCD
Partner Dimension	Stage Partner Master	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Pool Identification Dimension	Stage Pool Identification Master	SCD
Prepayment Reason Dimension	Stage Prepayment Reason Master	SCD
Product Dimension	Stage Product Master	SCD
Product Feature Dimension	Stage Product Feature Master	SCD
Product Type Dimension	Stage Product Type Master	SCD
Purchase Category Dimension	Stage Purchase Category Master	SCD
Request Type Dimension	Stage Request Type Master	SCD
Retention Offer Type Dimension	Stage Retention Offer Master	SCD
Sales Representative Dimension	Stage Sales Rep Master	SCD
Service Representative Dimension	Stage Service Rep Master	SCD
Service Slippage Reason Dimension	Stage Service Slip Reason Master	SCD
Survey Dimension	Stage Survey Master	SCD
Terminal Dimension	Stage Terminal Master	SCD
Terminal Type Dimension	Stage Terminal Type Master	SCD
Transaction Channel Dimension	Stage TXN Channel Master	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Transaction Dimension	Stage Transaction Master	SCD
Transaction Status Dimension	Stage Transactions Status Master	SCD
Txn Failure Reason Dimension	Stage Transactions Failure Reason Master	SCD
Vendor Dimension	Stage Vendor Master	SCD
Vintage Dimension	Stage Vintage Master	SCD
Band Dimension	Band Dimension Members Band Member Translation Band Member Attributes	AMHM/SCD
Region Dimension		Direct Load
Acquisition Channel Dimension		Direct Load
Instrument Category Dimension		Seeded
Currency Dimension		Seeded
Gender Dimension		Seeded
Marital Status Dimension		Seeded

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Calendar Dimension		Data Transformation (DT)
Account Dimension	Staging Product Processor Tables like	
	Stage Annuity Contracts	
	Stage Bill Contracts	
	Stage Borrowings	
	Stage Cards	DT
	Stage CASA Accounts	
	Stage Guarantees	
	Stage Investments	
	Stage LC Contracts	
	Stage Leases Contracts	
	Stage Loan Contracts	
	Stage Money Market Contracts	
	Stage Over Draft Accounts	

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
	Stage Term Deposit Contracts	
	Stage Trusts	
	Stage Swaps Contracts	
	Stage Repo Contracts	
	Stage Option Contracts	
	Stage Mutual Funds	
	Stage Futures And Forwards	

Some of the stage data can also come from master data management interfaces. In such cases, data from interface is loaded into staging interface tables and SCD run on the interface tables. Mapping of dimensional attributes to staging can be obtained by querying SYS_STG_JOIN_MASTER and SYS_TBL_MASTER tables in the atomic schema.

Fact Data Flow

Most of the Fact tables are mapped to staging counterparts through Table to table (T2T) mappings. Data from source systems can be loaded into staging through flat file or source system interfaces. T2T process then loads data to fact tables. Examples include Fact Common Account Summary, Fact Opportunity, and so on. Some of the Fact tables are loaded with processed fact information from other fact tables. For example, Fact CRM Customer Summary.

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Account Summary	Stage	Stage Annuity Contracts	T2T
		Stage Bill Contracts	
		Stage Borrowings	
		Stage Cards	
		Stage CASA Accounts	
		Stage Guarantees	
		Stage Investments	
		Stage LC Contracts	
		Stage Leases Contracts	
		Stage Loan Contracts	
		Stage Money Market Contracts	
		Stage Over Draft Accounts	
		Stage Term Deposit Contracts	

Fact Entity Name	Source	Source Entities	Method of populating measures
		Stage Trusts	
		Stage Annuity Contracts	
		Stage Bill Contracts	
		Stage Borrowings	
Fact CRM Account Summary	Stage		T2T
		Stage Cards	
		Stage CASA Accounts	
		Stage Guarantees	
		Stage Investments	
		Stage LC Contracts	
		Stage Leases Contracts	
		Stage Loan Contracts	
		Stage Money Market Contracts	
		Stage Over Draft Accounts	

Fact Entity Name	Source	Source Entities	Method of populating measures
		Stage Term Deposit Contracts	
		Stage Trusts	
Fact Common Customer Summary	Stage	Stage Customer Details	T2T
		Stage Party Rating Details	
		Stage Party Financials	
Fact CRM Customer Summary	Stage and Fact	Stage Customer Master	T2T/DT
		Stage Customer Details	
		Fact Common Account Summary	
		Fact Transaction Channel	
Fact Application	Stage	Stage Applications	T2T
Fact Account Feature Map	Stage	Stage Account Feature Map	T2T

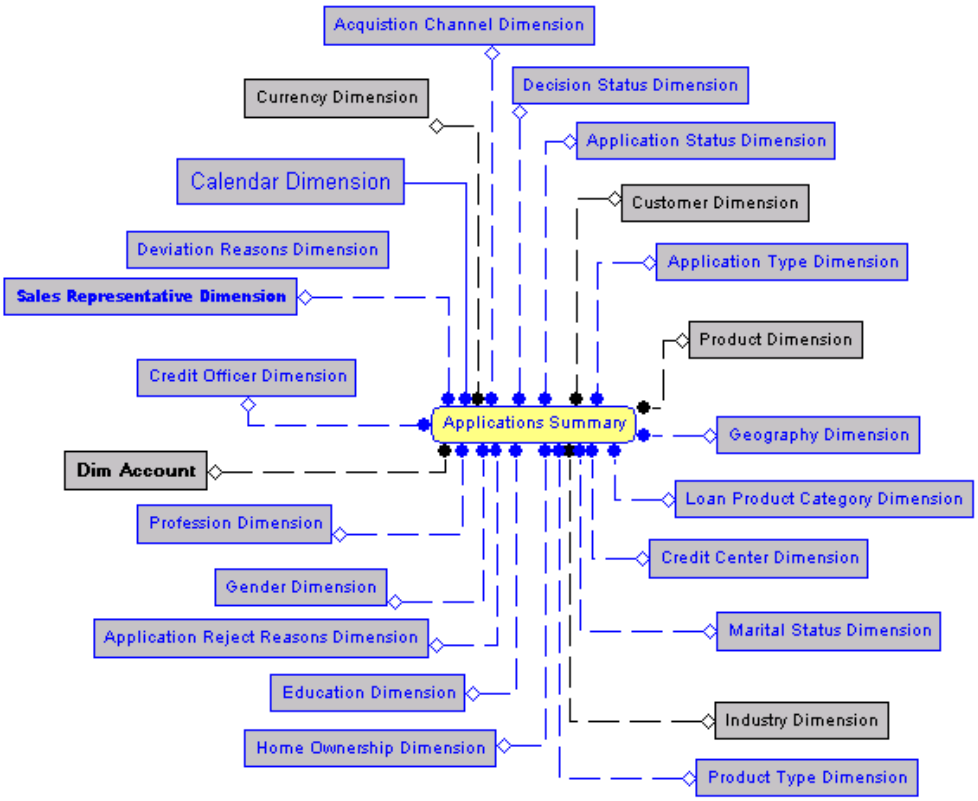
Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Customer to Customer Relationship	Stage	Stage Customer to Customer Relationships	T2T
Fact Survey Response	Stage	Stage Survey Response	T2T
Service Facts	Stage	Stage Service Requests	T2T
Transaction Channel	Stage	Stage ATM Transactions Stage Branch Transactions Stage Internet Transactions Stage Point Of Sale Transactions Stage TeleBanking Transactions	T2T
Exchange Rate History	Stage	Stage Exchange Rates	T2T

BI Data Model

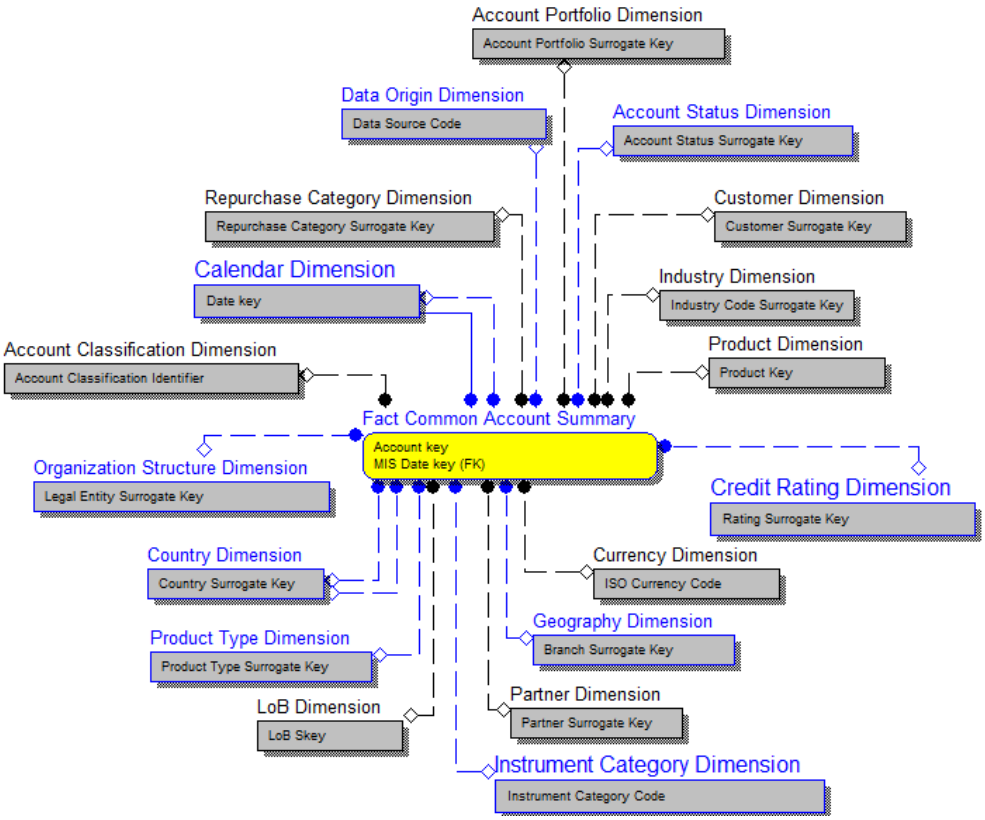
The BI data model is a star schema for the fact tables FCT_LEDGER_STAT and FCT_<Application>_ACCOUNT_SUMMARY.

Following are the subject areas in ERwin data model:

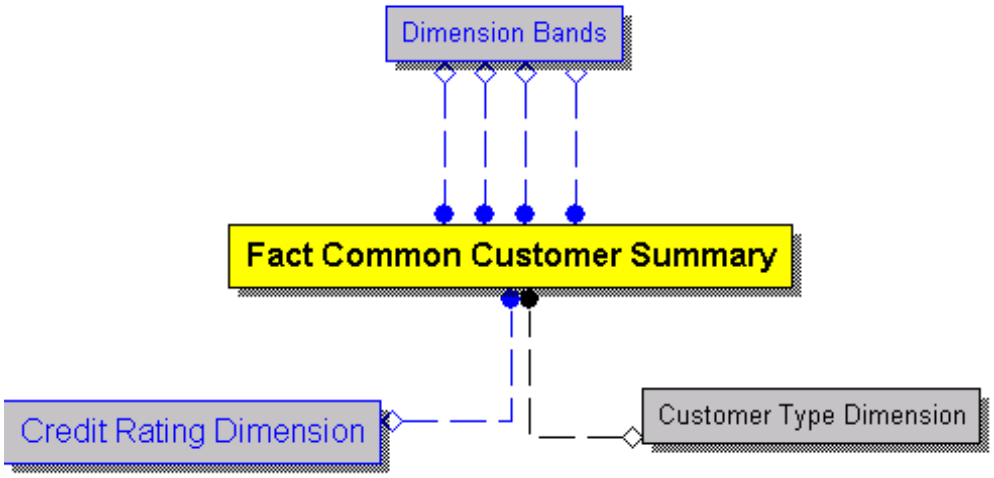
- Application



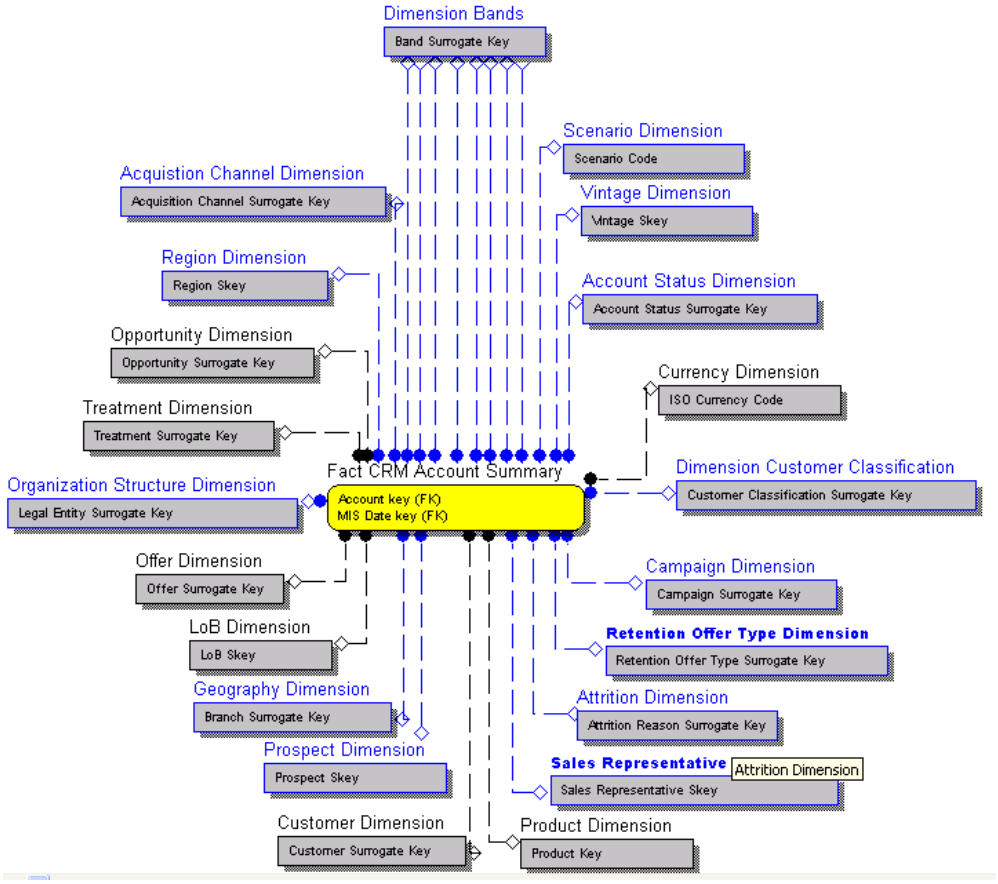
- Common Account Summary



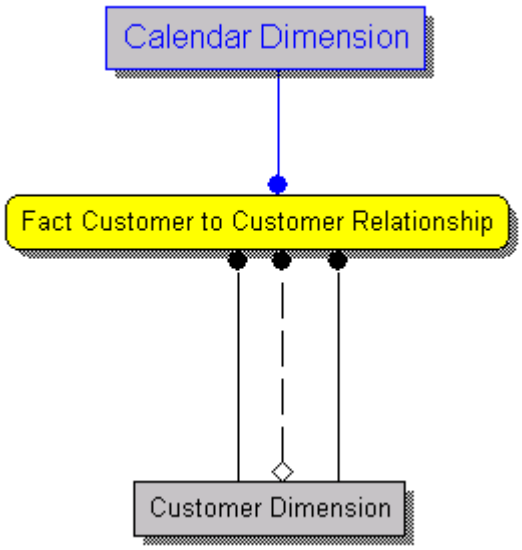
- Common Customer Summary



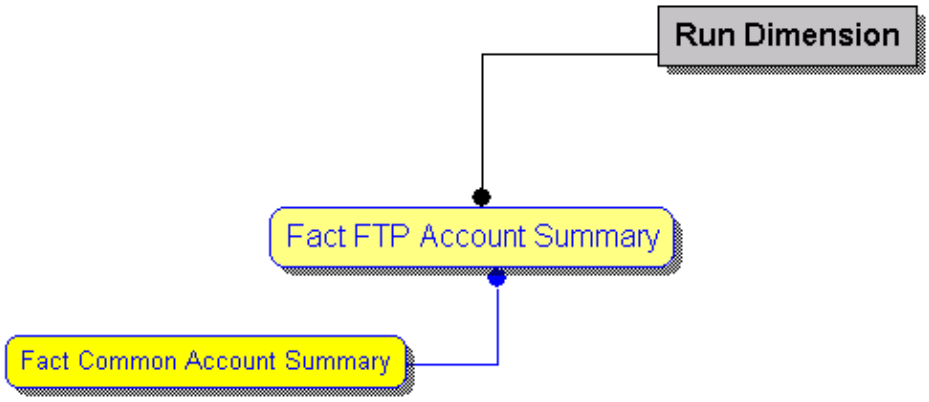
- CRM Account Summary



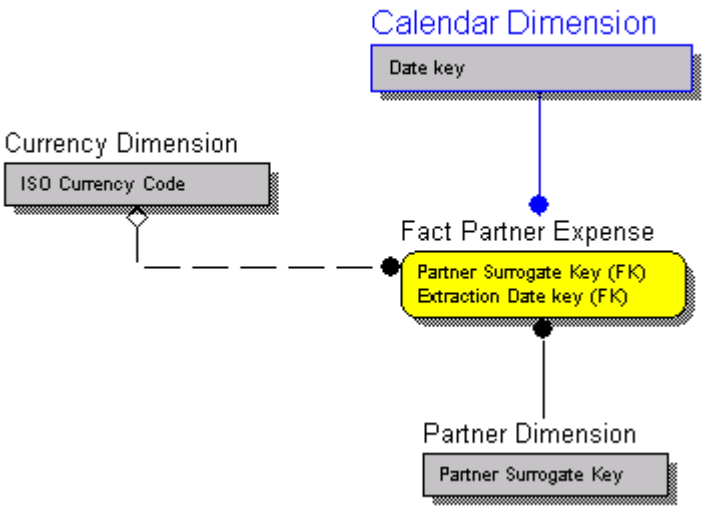
- Customer to Customer Relationship



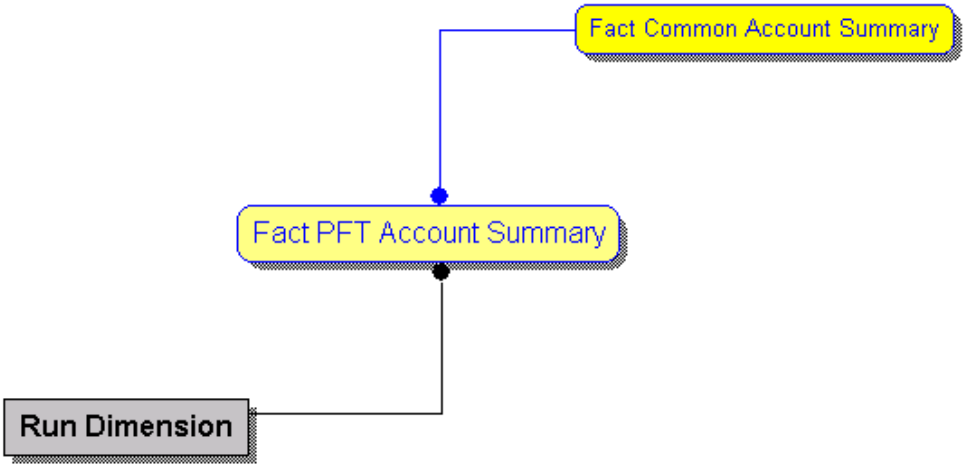
- FTP Account Summary



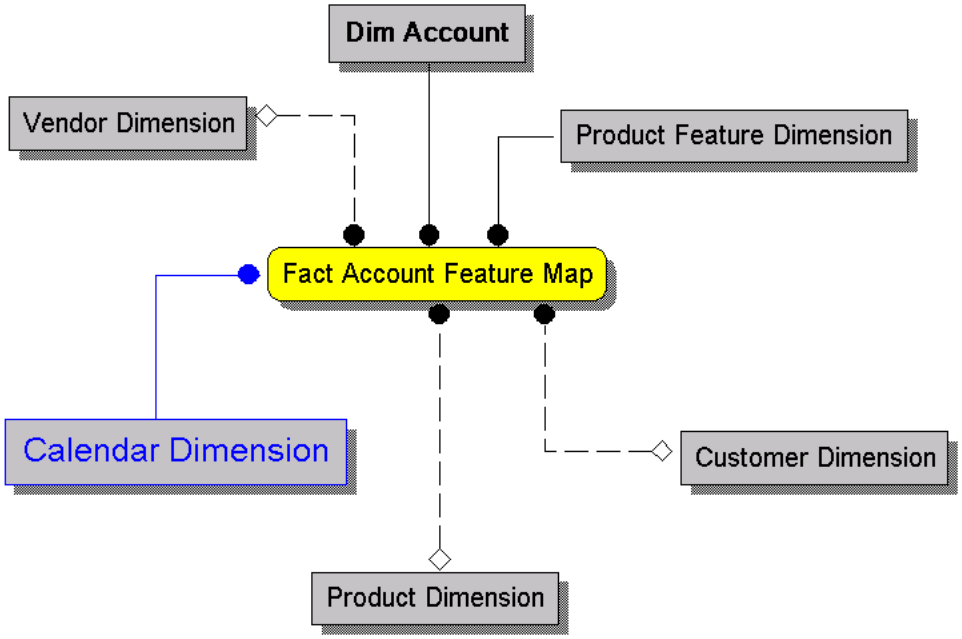
- Partner Expense Summary



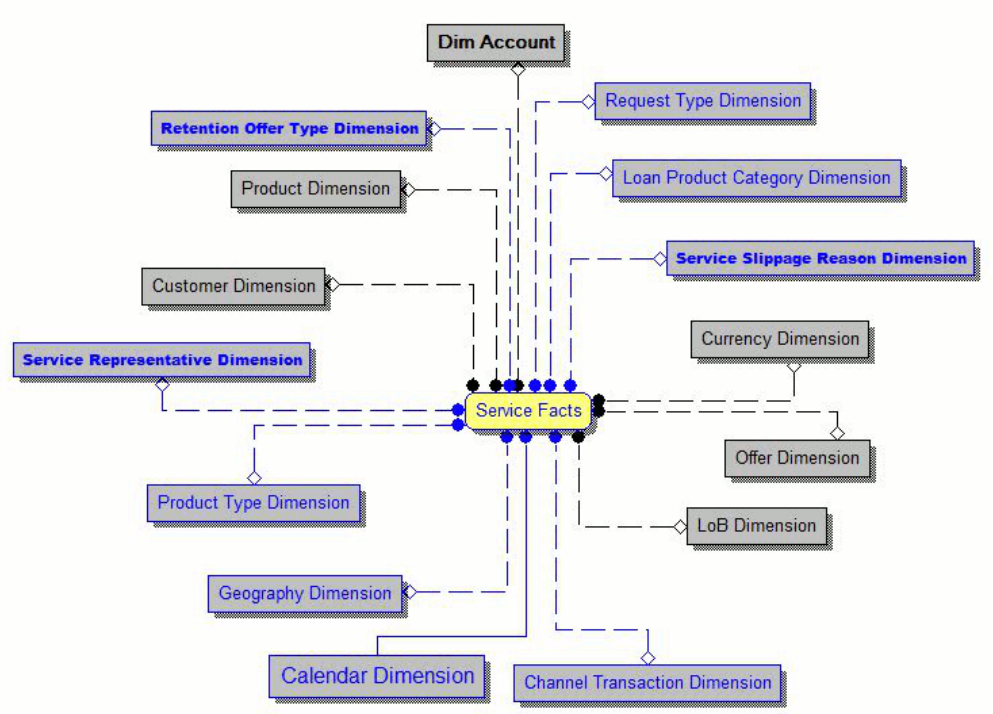
- PFT Account Summary



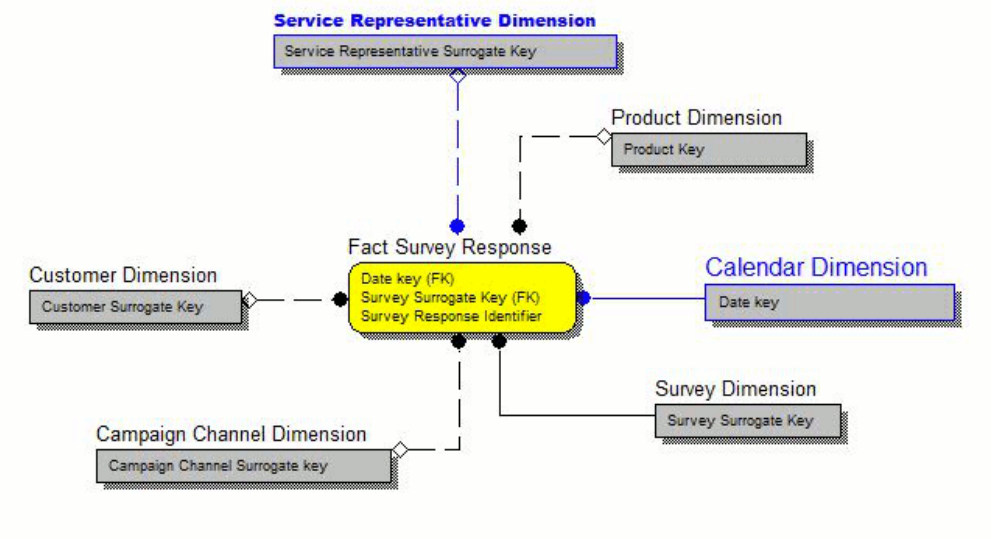
- Product Feature



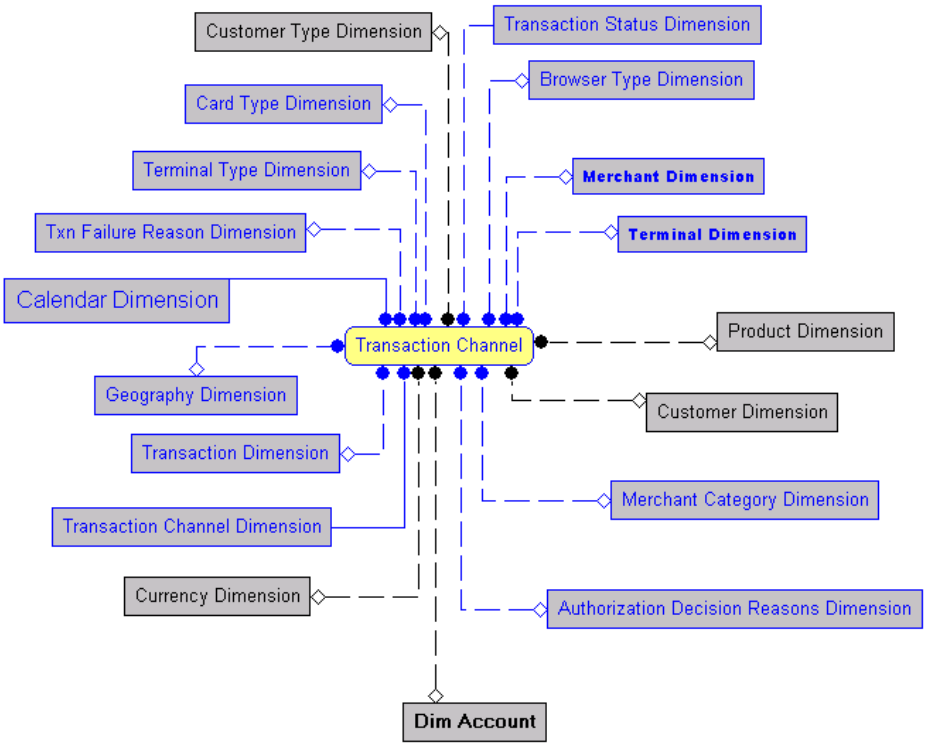
- Service



- Survey Response



- Transaction Channel



Data Flow: OFSCA BI Data Model to Essbase Cubes

Reports of OFSCA application can be configured to work on Relational database or Hyperion Essbase Multi-dimensional databases, that is cubes. Multi-dimensional databases store aggregated data for better performance and provide mechanisms for performing non-additive rollup within a hierarchy and defining complex derived measures using cross-dimensional operations. OFSAA Infrastructure is used for defining metadata about the cube and for building the Essbase cubes. Essbase cubes can be built out of reporting fact entities to improve performance.

OFSCA application has the following seeded cube metadata:

Cube Code	Cube Name	Fact Entities in dataset
ADCRM004	Channel Analysis	Fact Transaction Channel
ADCRM005	Service Analysis	Fact Service

3

Dimension Loading Process

Dimension Tables Population

OFSCA use the SCD component to handle dimensional data changes.

Overview of SCD Process

SCDs are dimensions that have data that changes slowly, rather than changing on a time-based, regular schedule.

For more information on SCDs, refer to:

- *Oracle Data Integrator Best Practices for a Data Warehouse* at

  http://www.oracle.com/technetwork/middleware/data-integrator/overview/odi-best practices-datawarehouse-whi-129686.pdf

- *Oracle Warehouse Builder Data Modeling, ETL, and Data Quality Guide* at

  http://docs.oracle.com/cd/E14072_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/owb10 gr2_gs/owb/lesson3/slowlychangingdimensions.htm
- http://www.oraclebidwh.com/2008/11/slowly-changing-dimension-scd/
- http://www.informationweek.com/news/software/bi/showArticle.jhtml?articleID=2 04800027&pgno=1
- http://www.informationweek.com/news/software/bi/showArticle.jhtml?articleID=5 9301280

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 SCD component of the platform is delivered via a C++ executable. The types of SCD handled by the OFSAAI SCD component for OFSPA solution are Type 1 and Type 2.

Prerequisites

1. The SCD executable should be present under <installation home>ficdb/bin. The file name is **scd.**
2. The user executing the SCD component should have execute rights on the file mentioned as prerequisite in point 2.
3. 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.

Tables Used by the SCD Component

The database tables used by the SCD component are:

- SYS_TBL_MASTER

  The solution installer will populate one row per dimension for the seeded dimensions in this 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

Column Name	Data Type	Column Description
STG_TBL_NM	VARCHAR2(30) NOT NULL	Staging Table Name
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.

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.*

- SYS_STG_JOIN_MASTER

  The solution installer will populate this table for the seeded dimensions.

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 section.
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.

Column Name	Data Type	Column Description
COL_DATATYPE	VARCHAR2(15) NULL	The list of possible values are VARCHAR, DATE, NUMBER based on the underlying column datatype.
COL_FORMAT	VARCHAR2(15) NULL	

The possible values for column type (the COL_TYPE column) in SYS_STG_JOIN_MASTER are:

1. PK – Primary Dimension Value (may be multiple for a given "Mapping Reference Number")
2. SK – Surrogate Key
3. DA – Dimensional Attribute (may be multiple for a given "Mapping Reference Number")
4. SD – Start Date
5. ED – End Date
6. LRI – Latest Record Indicator (Current Flag)
7. CSK – Current Surrogate Key
8. PSK – Previous Surrogate Key
9. SS – Source Key
10. LUD – Last Updated Date / Time
11. LUB – Last Updated By

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

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.*

- DIM_<dimensionname>_V – The database view which SCD uses as the source.

  Example
  Dim_Bands_V

  These views come as part of 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 should be added for every user-defined dimension.

Example

```
create sequence SEQ_DIM_<DIM>  minvalue 1
maxvalue 999999999999999999999999999
increment by 1
```

Executing the SCD Component

To execute the SCD component from OFSAAI ICC framework create a batch according to the following steps:

> **Note:** For a more comprehensive coverage of configuration and execution of a batch, see *Oracle Financial Services Analytical Applications*

Infrastructure User Guide.

- From the **Home** menu, select **Operations**, then select **Batch Maintenance**.
- Click **New Batch** ('+' symbol in Batch Name container) and enter the Batch Name and Description.
- Click **Save.**
- Select the Batch you created in the earlier step by clicking the check box in the Batch Name container.
- Click **New Task** ('+' symbol in Task Details container).
- Enter the Task ID and Description.
- Select **Run Executable**, from the Component ID list.
- Click **Parameters.** Select the following from the Dynamic Parameters List and then click **Save**:
  - Datastore Type - Select the appropriate datastore from the list
  - Datastore Name - Select the appropriate name from the list
  - IP address - Select the IP address from the list
  - Executable - scd,<map ref num>

    Example
    scd, 61 (Refer the following sections for details)
  - Wait: When the file is being executed you have the choice to either wait till the execution is complete or proceed with the next task. Click the list box of the field provided for Wait in the Value field to select 'Yes' or 'No'. Clicking **Yes** confirms that you wish to wait for the execution to be complete. Clicking **No** indicates that you wish to proceed.
  - Batch Parameter: Clicking **Yes** would mean that the batch parameters are also passed to the executable being started; else the batch parameters will not be passed to the executable.

    Important: Always select **Y** in Batch Parameter.

For the Parameter Executable earlier mentioned, the map ref num values are:

- -1 (if you want to process all the dimensions). The *Executable* parameter

mentioned earlier is - **scd,-1**.

- If you want to process for a single dimension, query the database table SYS_TBL_MASTER and give the number in the MAP_REF_NUM column for the dimension you want to process. These are the ones which come seeded with the install.

- Execute the batch from Batch Execution by choosing the batch created following the steps mentioned in the preceding sections for a date.

  Note: A seeded batch <Infodom>_SCD_Channel_Analysis_Dim is provided which has all the required dimensions as different tasks that are part of SCD.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen. You can access this from the Left Hand Side (LHS) menu as follows:

From the **Home** menu, select **Operations**, then select **Batch Monitor.**

Note: For a more comprehensive coverage, see *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

The status messages in Batch Monitor are :

N - Not Started

O - On Going

F - Failure

S – Success

The ICC execution log can be accessed on the application server in the following directory: $FIC_DB_HOME/log/ficgen.

The file name will have the batch execution id.

Sample

/dbfiles/home/oracle/OFSAAI/ficdb/log/ficgen

The detailed SCD component log can be accessed on the application server in the directory $FIC_HOME, go one folder up from there and then accessing the following path /ftpshare/<infodom name>/logs

The file name will have the batch execution id.

Sample

/dbfiles/home/oracle/ftpshare/OFSAADEMO/logs

Check the **.profile** file in the installation home if you are not able to find the paths mentioned earlier.

4

Time Dimension Population

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). Time dimension makes it possible to report the balances by Year, Quarter, or Month using the rollup functionality of cubes. Cubes makes it possible to rollup the monthly balances to a quarter and then to a year level. For example, the monthly data for January, February and March gets rolled up to Quarter 1 and the Quarter 1, 2, 3 and 4 data get rolled up to, say Year 2011. 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 is used to specify how to rollup the child member balances (for example, 3 month rolling average).

This chapter covers the following 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

Overview of Time Dimension Population

Time dimension population transformation is used to populate the DIM_DATES table with values between two dates specified by the user as a batch parameter.

The database components, used by the transformations are:

1. Database function FN_DIM_DATES
2. Database procedure PROC_DIM_DATES_POPULATION that is called by the function FN_DIM_DATES.

Prerequisites

1. All the post install steps mentioned in the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration guide* and the solution installation manual of *Oracle Financial Services Channel Analytics* have to 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:

   (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 *Oracle Financial Services Analytical Applications Infrastructure User Guide*)

   1. Iccserver
   2. Router
   3. AM Server
   4. Messageserver

4. Batches will have to be created for executing the function. For more details see, Executing the Time Dimension Population Transformation, page 4-2 section.

Tables Used by the Time Dimension Population Transformation

- DIM_DATES - This table stores the date details to be used for building the cubes.

For more details on viewing the structure of earlier tables, refer to*Oracle Financial Services Analytical Applications Data Model Data Dictionary* or the *Erwin Data Model.*

Executing the Time Dimension Population Transformation

To execute the function from OFSAAI Information Command Center (ICC) frame work, create a batch by performing the following steps:

> **Note:** For a more comprehensive coverage of configuration and execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

1. From the **Home** menu, select **Operations**, then select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container) and enter the Batch Name and Description.
3. Click **Save**.
4. Select the Batch you have created in the earlier step by clicking on the checkbox in the Batch Name container.
5. Click **New Task** ('+' symbol in Task Details container).
6. Enter the Task ID and Description.
7. Select **Transform Data**, from the components list.
8. Select the following from the Dynamic Parameters List and then click **Save**:
   - Datastore Type - Select appropriate datastore from the list
   - Datastore Name - Select appropriate name from the list
   - IP address - Select the IP address from the list
   - Rule Name - Select **Dim_Dates_Population** from the list of all available transformations. (This is a seeded Data Transformation which is installed as part of the application. If you don't see this in the list, contact Oracle support)
   - Parameter List – Start Date, End Date (Refer the following for details on Parameter list)

     Explanation for the parameter list is:

     - Start Date – This is the date starting from which the Transformation will populate Dim_Dates table. Date should be specified in the format 'YYYYMMDD'.
     - End Date - This is the date up to which the Transformation will populate Dim_Dates table. Date should be specified in the format 'YYYYMMDD'.

       Sample parameter for this task is '20081131','20091231'.

9. You can execute the batch in two ways:
   1. Execute the batch from Batch Execution by choosing the batch created following the steps mentioned in the preceding sections for a date.

      Note: A seeded batch <INFODOM>_aCRM_CommonTasks -

Task2 is provided so that the user can just modify the parameters and execute the batch.

2. 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, P_ED_DT

   Sample parameter values : 'Batch1','20091231', '20081131','20091231'

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor window.

Note: For a more comprehensive coverage of configuration and execution of a Batch, refer to*Oracle Financial Services Analytical Applications Infrastructure User Guide*.

The status messages in batch monitor are:

N - Not Started

O - On Going

F - Failure

S – Success

The Event Log window in Batch Monitor provides logs for execution with the top row being the most recent. If there is any error during execution, it will get listed here. Even if you see Successful as the status in Batch Monitor it is advisable to go through the Event Log and re-check if there are any errors. The execution log can be accessed on the application server by going to the directory *$FIC_DB_HOME/log/date*. The file name will have the Batch Execution ID.

The database level operations log can be accessed by querying the FSI_MESSAGE_LOG table. The batch run id column can be filtered for identifying the relevant log.

Check the **.profile** file in the installation home if you are not able to find the paths mentioned earlier.

5

Account Dimension Population

Populating Accounts Dimension

Account Number is an alphanumeric unique identifier within each staging instrument tables. Hence, there is a need to generate a numeric surrogate key for each of the account number. This information is stored in DIM_ACCOUNT table.

Function **fn_popDimAccount** is a function to populate numeric surrogate key for each account number. The function performs the following:

- In case, surrogate key generation is required, then it uses a sequence to populate DIM_ACCOUNT table.
- In case, surrogate key generation is not required, then it expects that the account number to be numeric and populates DIM_ACCOUNT with that information.

Table Details - FSI_DIM_ACCOUNT_SETUP_DETAILS

Account dimension population makes use of setup table FSI_DIM_ACCOUNT_SETUP_DETAILS.

It would have seeded entries from the application installation. This stores the account number column of the staging product processor tables

Column Name	Data Type	Column Description
TABLE_NAME	VARCHAR2(30)	This is the name of the Staging Product Processor Table.

Column Name	Data Type	Column Description
ACCOUNT_NUMBER_ COLUMN_NAME	VARCHAR2(30)	This is the Account Number Column Name of the staging Product Processor table .
LEG_TYPE_FLAG	CHAR(1)	In case, if the Pay Leg & Receive Leg instruments have both same data type then value will be 2.
SQL_TEXT	VARCHAR2(4000)	

Here is a Sample Data:

TABLE_NAME	STG_CASA	STG_TD_CONTRACTS	STG_FUTURES
ACCOUNT_NUMBER_COLUMN_NAME	V_ACCOUNT_NUMBER	V_CONTRACT_CODE	V_CONTRACT_CODE
LEG_TYPE_FLAG			2
SQL_TEXT			

Executing the Account Dimension Population

To execute the account dimension population, create a batch by performing the following steps:

1. From the **Home** menu, select **Operations**, then select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container) and enter the Batch Name and description.
3. Click **Save**.
4. Select the Batch you have created in the earlier step by clicking on the check box in the Batch Name container.
5. Click **New Task** ('+' symbol in Task Details container).
6. Enter the Task ID and Description.

7. Select **Transform Data**, from the components list.

8. Select the following from the Dynamic Parameters List and then click **Save**:

   - Datastore Type - Select appropriate datastore from the list.
   - Datastore Name - Select appropriate name from the list. Generally, it is the infodom name.
   - IP address - Select the IP address from the list
   - Rule Name - **fn_popDimAccount**
   - Parameter List:
     - Surrogate Key Required Flag – Y or N

       Batch run ID and As of Date are passed internally by the ICC to the Data Transformation task.

9. Execute the batch.

Execute the batch from Batch Execution by choosing the batch created following the steps mentioned in the preceding sections for a required date.

> **Note:** A seeded batch <INFODOM>_aCRM_CommonTasks – Task3 is provided so that the user can just modify the parameters and execute the batch.

Checking the Execution Status

The status of execution can be monitored using the batch monitor screen.

> **Note:** For a more comprehensive coverage of configuration & execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

The status messages in batch monitor are :

N - Not Started

O - On Going

F - Failure

S – Success

The Event Log window in Batch Monitor provides logs for execution with the top row being the most recent. If there is any error during execution, it will get listed here. Even

if you see Successful as the status in Batch Monitor it is advisable to go through the Event Log and re-check if there are any errors. The execution log can be accessed on the application server by going to the directory $FIC_DB_HOME/log/date. The file name will have the batch execution id.

The database level operations log can be accessed by querying the FSI_MESSAGE_LOG table. The batch run id column can be filtered for identifying the relevant log.

Check the **.profile** file in the installation home if you are not able to find the paths mentioned earlier.

6

Exchange Rate History Population

Introduction

Exchange Rate History entity stores the exchange rates between the currencies for an effective date from one or multiple sources. Exchange Rate History population should be executed before any fact table is populated to ensure exchange rates between currencies are available prior to fact table population. Exchange Rate History entity is loaded by means of Table to Table Transformation process.

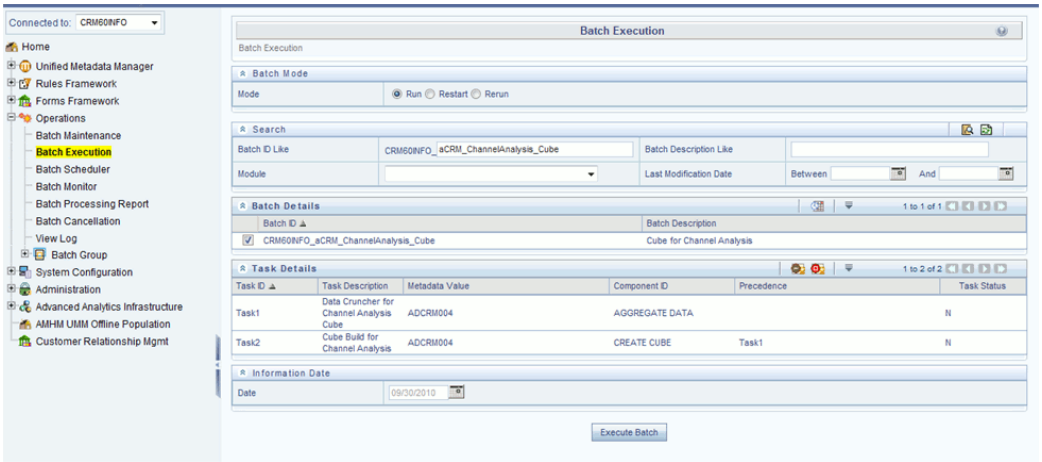
Following is the seeded T2T definition that loads data into Exchange Rate History table:

T2T Definition Name	Source Table(s)	Destination Table
T2T_EXCHANGE_RATE_HIST	STG_EXCHANGE_RATE_HIST	FSI_EXCHANGE_RATE_HIST

Exchange Rate History Population

A seeded batch, **<INFODOM>_aCRM_CommonTasks - Task4** has to be executed for the required date.

You can execute the T2T component from the Operations (formerly Information Command Center (ICC) framework) module of OFSAAI, as mentioned below:



Alternatively, you can define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI. For more information on defining a new Batch, refer to How to create New Batch, page D-1 section. To define a new task for a Batch definition:

1. Select the check box adjacent to the **Batch Name** to select the batch you have created.
2. Enter the **Task ID** and **Description**.
3. Select **Load Data** from the Components list.
4. Select the following from the **Dynamic Parameters** list and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T transformation T2T_EXCHANGE_RATE_HIST from the list.
5. Data file name is blank for any Table to Table Load mode.
6. Follow the preceding steps to include the remaining T2Ts within the same Batch definition.
7. Execute the batch created in the preceding steps.

8. Check T2T component logs and batch messages to check the status of load.

   T2T component can fail because of following causes:

   - Unique constraint error – Target table may already contain the primary keys which are the same that of the staging tables.
   - NOT NULL constraint error – do not have values for NOT NULL columns in the target table.

   For more information, refer to *Operations* chapter in*Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The Batch execution status can be monitored from the Batch Monitor window of *OFSAAI Operations* module.

> **Note:** For a more comprehensive coverage of configuration, execution, and monitoring of a batch, refer to *Operations* chapter in *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

The status messages in Batch Monitor window are:

N - Not Started

O - On Going

F - Failure

S – Success

The execution log can be accessed from the *$FIC_DB_HOME/log/t2t* directory of the application server, where the file name of the log is the Batch Execution ID.

The following tables can be queried for errors:

- FCT_COMMON_ACCOUNT_SUMMARY$
- FCT_CRM_ACCOUNT_SUMMARY$

7

Account Summary Population

Account Summary tables are loaded from the staging product processor tables using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

This chapter covers the following topics:

- Overview of Account Summary Tables
- Overview of Account Summary Population
- Prerequisites
- Executing the Account Summary Population T2T
- Checking the Execution Status
- Account Summary T2Ts

Overview of Account Summary 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 Account Summary table 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 three vertically partitioned Account Summary tables that are organized by application subject area.

- FCT_COMMON_ACCOUNT_SUMMARY – This table is shared by all OFSAA BI applications which contain dimensional values, attributes, and financial measures which are generally applicable to the individual account records. This data is sourced directly from the staging area.
- FCT_CRM_ACCOUNT_SUMMARY – This table has the measures used by all the

Customer Insight applications.

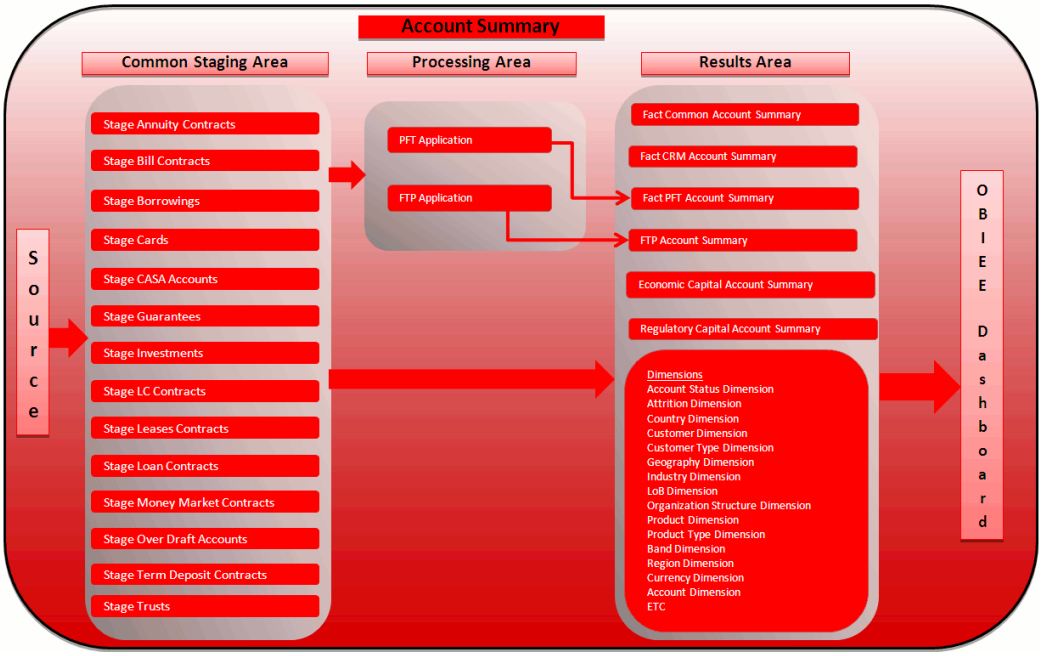
There are few other Account Summary tables, which have been designed to store Enterprise Risk Management (ERM) data:

- FCT_PFT_ACCOUNT_SUMMARY - This table has Profitability Management (PFT) specific measures.
- FCT_FTP_ACCOUNT_SUMMARY - This table has Funds Transfer Pricing (FTP) specific measures.
- FCT_REG_CAP_ACCOUNT_SUMMARY - This table has Regulatory Capital specific measures.
- FCT_ECO_CAPITAL_ACCOUNT_SUMMARY - This table has Economic Capital specific measures.

The above mentioned Account Summary tables are part of data models, but there are no seeded T2T definitions available to populate them. T2T processes must be custom configured to populate these tables to use measures defined on these tables for reporting.

Data Flow

The Below diagram depicts the flow of data into account summary tables:



Overview of Account Summary Population

Table to Table seeded definitions are provided for loading data into Common Account Summary and CRM Account summary tables.

These definitions along with the source and destination tables are tabulated below:

- Common Account Summary

SL No	Source Table	T2T Definition Name	Destination Table
1	STG_ANNUITY_CONTRACTS	T2T_STG_ANNUITY_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
2	STG_BILLS_CONTRACTS	T2T_STG_BILLS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
3	STG_BORROWINGS	T2T_STG_BORROWINGS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
4	STG_CARDS	T2T_STG_CARDS_CAS	FCT_COMMON_ACCOUNT_SUMMARY

SL No	Source Table	T2T Definition Name	Destination Table
5	STG_CASA	T2T_STG_CASA_CAS	FCT_COMMON_ACCOUNT_SUMMARY
6	STG_GUARANTEES	T2T_STG_GUARANTEES_CAS	FCT_COMMON_ACCOUNT_SUMMARY
7	STG_INVESTMENTS	T2T_STG_INVESTMENTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
8	STG_LC_CONTRACTS	T2T_STG_LC_CAS	FCT_COMMON_ACCOUNT_SUMMARY
9	STG_LEASES_CONTRACTS	T2T_STG_LEASES_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
10	STG_LOAN_CONTRACTS	T2T_STG_LOANS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
11	STG_MM_CONTRACTS	T2T_STG_MM_CAS	FCT_COMMON_ACCOUNT_SUMMARY
12	STG_OD_ACCOUNTS	T2T_STG_OD_CAS	FCT_COMMON_ACCOUNT_SUMMARY
13	STG_TD_CONTRACTS	T2T_STG_TD_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
14	STG_TRUSTS	T2T_STG_TRUSTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY

- CRM Account Summary

Sl No.	Source Table	T2T Definition Name	Destination Table
1	STG_ANNUITY_CONTRACTS	T2T_STG_CRMAS_ANNUITY_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY

Sl No.	Source Table	T2T Definition Name	Destination Table
2	STG_BILLS_CONTRACTS	T2T_STG_CRMAS_BILLS_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
3	STG_BORROWINGS	T2T_STG_CRMAS_BORROWINGS	FCT_CRM_ACCOUNT_SUMMARY
4	STG_CARDS	T2T_STG_CRMAS_CARDS	FCT_CRM_ACCOUNT_SUMMARY
5	STG_CASA	T2T_STG_CRMAS_CASA	FCT_CRM_ACCOUNT_SUMMARY
6	STG_GUARANTEES	T2T_STG_CRMAS_GUARANTEES	FCT_CRM_ACCOUNT_SUMMARY
7	STG_INVESTMENTS	T2T_STG_CRMAS_INVESTMENTS	FCT_CRM_ACCOUNT_SUMMARY
8	STG_LC_CONTRACTS	T2T_STG_CRMAS_LC_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
9	STG_LEASES_CONTRACTS	T2T_STG_CRMAS_LEASES_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
10	STG_LOAN_CONTRACTS	T2T_STG_CRMAS_LOAN_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
11	STG_MM_CONTRACTS	T2T_STG_CRMAS_MM_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
12	STG_OD_ACCOUNTS	T2T_STG_CRMAS_OD_ACCOUNTS	FCT_CRM_ACCOUNT_SUMMARY
13	STG_TD_CONTRACTS	T2T_STG_CRMAS_TD_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
14	STG_TRUSTS	T2T_STG_CRMAS_TRUSTS	FCT_CRM_ACCOUNT_SUMMARY

Note: Currency Exchange Rate History table has to be populated prior

to loading the Account Summary tables.

Prerequisites

1. All the post install steps mentioned in the *Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration guide* and the Solution Installation manuals have to be completed successfully.

2. Application User must be mapped to "BATPRO" role, that has seeded batch execution function.

3. Before executing a batch, check if the following services are running on the application server:

    1. Iccserver

    2. Router

    3. AM Server

    4. Messageserver

        Note: For more information on how to check if the services are up and how to start the services if you find them not running, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

4. Batches will have to be created for executing. This is explained in Executing the Account Summary Population T2T section.

5. Dimension Population should be performed before executing the T2T batch.

    Note: For more information , refer to Dimension Loading Process, and Time Dimension Population, page 4-1 chapters.

Fact Common Account Summary

Following are the lists of tables used in the population of Fact Common Account Summary table. These tables must be loaded prior to executing the T2T:

- DIM_DATES
- DIM_ACCOUNT

- DIM_CUSTOMER
- DIM_PRODUCT
- DIM_CHANNEL
- DIM_BANDS
- DIM_ORG_STRUCTURE

Fact CRM Account Summary

Fact Common Account Summary entity needs to be populated before executing the Fact CRM Account Summary T2Ts.

Following are the list of tables used in the population of Fact CRM Account Summary:

- DIM_DATES
- DIM_ACCOUNT
- FCT_COMMON_ACCOUNT_SUMMARY
- DIM_ACCT_STATUS
- DIM_BANDS
- DIM_CAMPAIGN
- DIM_CHANNEL
- DIM_CUSTOMER
- DIM_ORG_STRUCTURE
- DIM_LOB
- DIM_OFFER
- DIM_OPPORTUNITY
- DIM_PRODUCT
- DIM_PROSPECT
- DIM_RETENTION_OFFER_TYPE
- DIM_SALES_REPRESENTATIVE

- DIM_TREATMENT
- DIM_VINTAGE

For details on populating dimension tables such as DIM_CUSTOMER, DIM_BANDS, and so on, refer toDimension Tables Population, section under *Dimension Loading Process* chapter.

For details on populating DIM_DATES dimension table, refer toTime Dimension Population, chapter.

You can also refer to *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

For more information on populating account dimensions, refer toAccount Dimension Population, page 5-1 chapter.

For more information on the dimensions, refer to *ERwin Datamodel*.

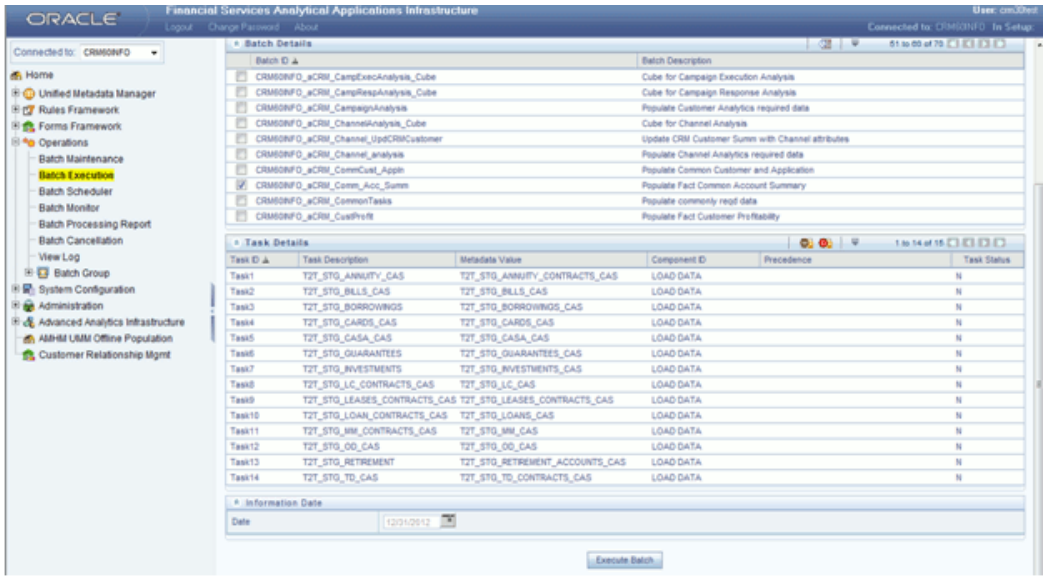
Executing the Account Summary Population T2T

Fact Common Account Summary table has to be loaded prior loading any other Account Summary tables.

You can execute the T2T component from the Operations (formerly Information Command Center (ICC) framework) module of OFSAAI, as mentioned below:

Fact Common Account Summary

A seeded batch, **<Infodom>_aCRM_Comm_Acc_Summ** has to be executed for the required MIS Date.



Alternatively, you can define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI. For more information on defining a new Batch, refer to How to create New Batch, page D-1 section. To define a new task for a Batch definition:

1. Select the check box adjacent to the **Batch Name** to select the batch you have created.
2. Enter the **Task ID** and **Description**.
3. Select **Load Data** from the Components list.
4. Select the following from the **Dynamic Parameters** list and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name for the source stage channel table you want to process.
5. Data file name is blank for any Table to Table Load mode.

   Default value refers to the currency calculation. If there is a need for currency conversion in T2T transactions, the Default value has to be provided.

For example, Default value filed holds [DRCY]='USD', where 'USD' acts as reporting currency parameter for T2T.

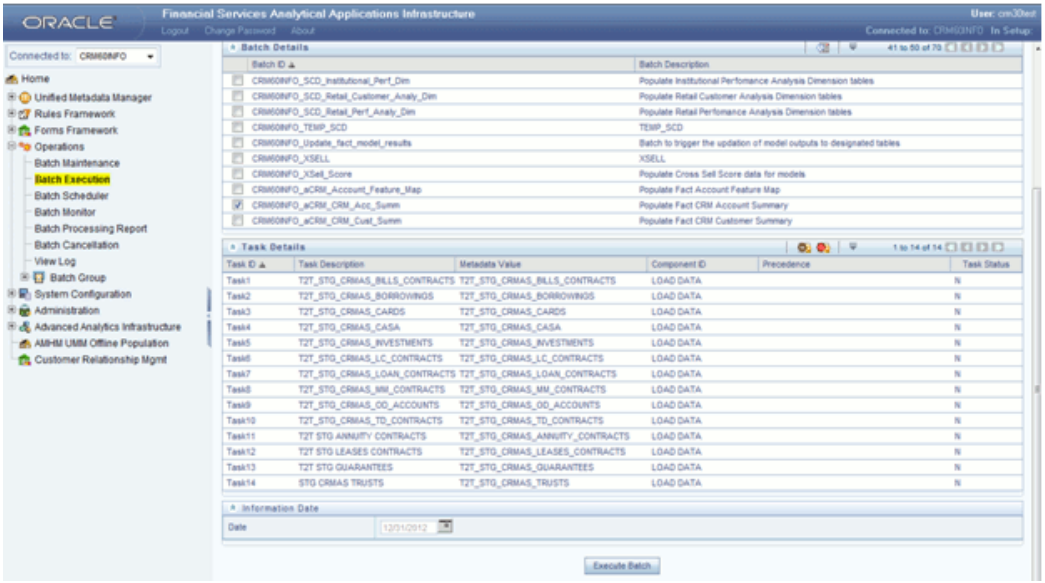
6. Follow the preceding steps to include the remaining T2Ts within the same Batch definition.

7. Execute the batch created in the preceding steps.

For more information, refer to *Operations* chapter in*Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Fact CRM Account Summary

A seeded batch, **<Infodom>_aCRM_CRM_Acc_Summ** has to be executed for the required MIS Date.



Alternatively, you can define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI. For more information on defining a new Batch, refer to How to create New Batch, page D-1 section. To define a new task for a Batch definition:

1. Select the check box adjacent to the **Batch Name** to select the batch you have created.

2. Enter the **Task ID** and **Description**.

3. Select **Load Data** from the Components list.

4. Select the following from the **Dynamic Parameters** list and click **Save**.

- **Datastore Type** - Select the appropriate datastore from the list.
- **Datastore Name** - Select the appropriate name from the list.
- **IP address** - Select the IP address from the list.
- **Load Mode** - Select Table to Table from the list.
- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name for the source stage product processor table you want to process.

5. Data file name is blank for any Table to Table Load mode.

   Default value refers to the currency calculation. If there is a need for currency conversion in T2T transactions, the Default value has to be provided.

   For example, Default value filed holds [DRCY]='USD', where 'USD' acts as reporting currency parameter for T2T.

6. Follow the preceding steps to include the remaining T2Ts within the same Batch definition.

7. Execute the batch created in the preceding steps.

For more information, refer to *Operations* chapter in*Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The Batch execution status can be monitored from the Batch Monitor window of *OFSAAI Operations* module.

> **Note:** For a more comprehensive coverage of configuration, execution, and monitoring of a batch, refer to *Operations* chapter in *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

The status messages in Batch Monitor window are:

N - Not Started

O - On Going

F - Failure

S – Success

The execution log can be accessed from the *$FIC_DB_HOME/log/t2t* directory of the application server, where the file name of the log is the Batch Execution ID.

The following tables can be queried for errors:

- FCT_COMMON_ACCOUNT_SUMMARY$
- FCT_CRM_ACCOUNT_SUMMARY$

Account Summary T2Ts

T2T definitions can be retrieved in a spreadsheet for reference, from the Metadata Browser section of Unified Metadata Manager (UMM) component in OFSAAI.

> **Note:** For more information, refer to *Unified Metadata Manager* chapter in *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

8

Customer Summary Population

This chapter explains the process flow for populating Fact Common Customer Summary table.

This chapter covers the following topics:

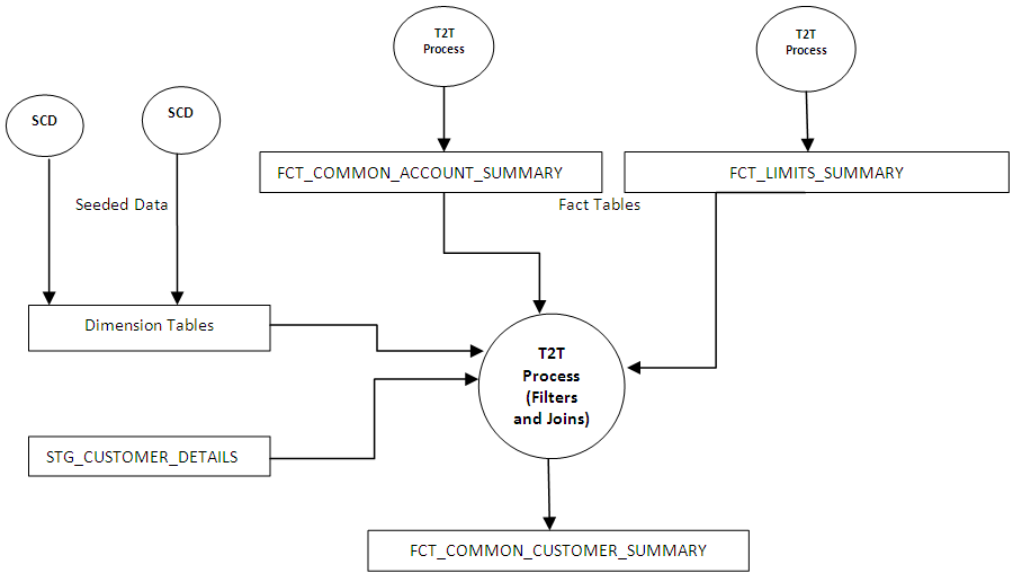
- Overview of Common Customer Summary Tables
- Prerequisites
- Executing the Customer Summary Population T2T

Overview of Common Customer Summary Tables

Fact Common Customer Summary table stores attributes pertaining to customer related data on an 'as-is' basis received from the source system. Data is populated into this table using T2T.

Customer balances are derived from account summary. Customer relationship table drives the relationship between accounts and customers. Common customer summary data is populated for all the active customers in customer dimension.

Following data flow diagram explains the process flow for populating Fact Common Customer Summary table:



Prerequisites

Following are the lists of tables used in the population of Fact Common Customer Summary and these tables are required to be loaded prior to running the T2T:

- DIM_CUSTOMER
- DIM_BANDS
- DIM_EDUCATION
- DIM_CUSTOMER_TYPE
- DIM_GENDER
- DIM_INDUSTRY
- DIM_CHANNEL
- DIM_GEOGRAPHY
- DIM_MARITAL_STATUS
- DIM_MANAGEMENT
- DIM_PROFESSION
- DIM_CREDIT_RATING

- DIM_VINTAGE
- DIM_MIGRATION_REASONS
- FCT_COMMON_ACCOUNT_SUMMARY
- FCT_LIMITS_SUMMARY
- STG_CUSTOMER_DETAILS
- STG_PARTY_RATING_DETAILS
- STG_PARTY_FINANCIALS

Dimensions tables are loaded through the SCD process. The fact tables such as FCT_COMMON_ACCOUNT_SUMMAY and FCT_LIMITS_SUMMARY are loaded from their respective T2T processes.

For more information on SCDs, refer to Dimension Loading Process, chapter.

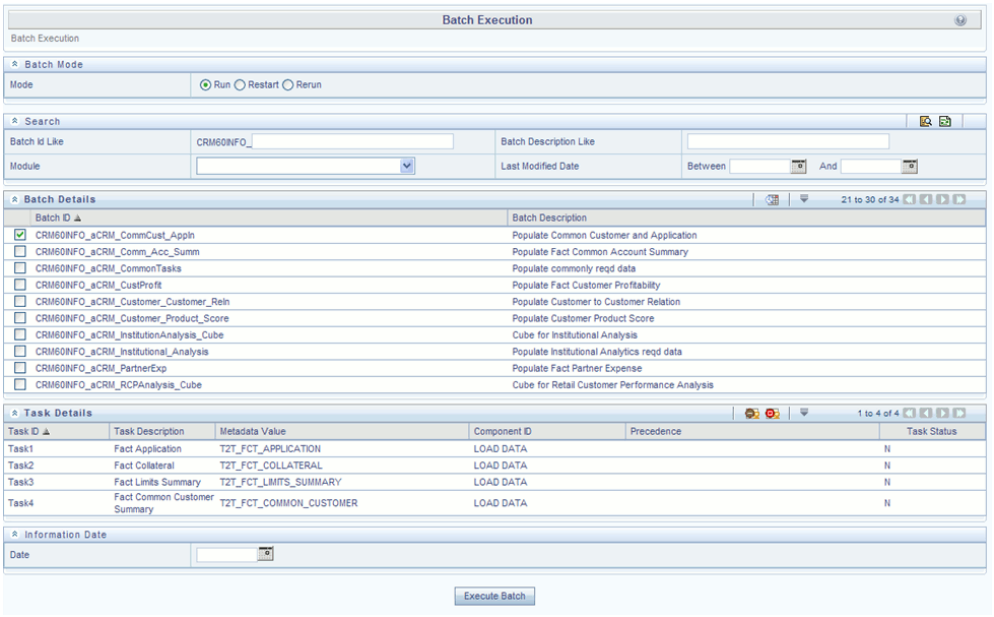
Executing the Customer Summary Population T2T

Fact Common Customer Summary T2T can be executed by executing task present in the seeded batch

<INFODOM>_aCRM_CommCust_Appln.

Following steps will help you to execute the batch:

1. Go to the Batch Execution screen.
2. Select the seeded batch <INFODOM>_aCRM_CommCust_Appln where INFODOM is the information domain where application is installed.
3. Select the AS_OF_DATE for which source customer information is required to be loaded into the table.
4. Click **Execute Batch**.
5. Monitor the status of the batch using Batch Monitor.



Error Messages

Following is the most common error message which will be logged in the T2T log file present in the $FIC_DB_HOME/logs/t2t folder:

- **Unique Constraint Violation** : This occurs when attempting re-load or loading existing records for the already executed AS_OF_DATE.

9

Fact Data Population

Introduction

This chapter explains all the fact tables which within describe about the seeded T2T Definitions with related Source Table and Destination tables. Prerequisites needed in population of the Fact table and tables required to be loaded prior to running the T2T.

Each fact table contains a section on how to execute the T2T component from OFSAA Infrastructure ICC framework and access the execution log to check the execution status.

Fact CRM Customer Summary

Fact CRM Customer Summary entity captures different derived/computed customer attributes pertaining to Customer Insight. Fact Common Customer Summary stores the generic application-agnostic source/raw customer attributes. Fact CRM Customer Summary is a vertical partitioned entity and has relationship to Fact Common Customer Summary.

Load Data into Fact CRM Customer Summary

Customer balances in the Fact CRM Customer Summary entity are derived from account summary. Customer relationship entity drives the relationship between accounts and customers.

Following is the seeded Table-to-Table definitions that loads data related to Fact CRM Customer Summary:

T2T Definition Name	Source Table(s)	Destination Table
T2T_FCT_CRM_CUSTOMER_	STG_CUSTOMER_MASTER	FCT_CRM_CUSTOMER_S

T2T Definition Name	Source Table(s)	Destination Table
SUMMARY	STG_CUSTOMER_DETAILS	UMMARY
	FCT_COMMON_ACCOUNT_ SUMMARY	
	FCT_CRM_ACCOUNT_SUM MARY	

Refer to *Oracle Financial Services Analytical Applications Data Model Data Dictionary* or the *Erwin Data Model* to view the detailed structure of the tables.

Prerequisites

Fact Common Customer Summary entity needs to be populated before executing the Fact CRM Customer Summary T2T. Refer to Fact Common Account Summary chapter for details related to Fact Common Customer Summary T2T.

Following tables that are used in the population of Fact CRM Customer Summary need to have relevant data prior to executing the T2T:

- STG_CUSTOMER_MASTER - Mandatory
- STG_CUSTOMER_DETAILS - Mandatory
- DIM_DATES - Mandatory
- DIM_CUSTOMER - Mandatory
- FCT_COMMON_ACCOUNT_SUMMARY - Mandatory
- FCT_CRM_ACCOUNT_SUMMARY - Mandatory
- DIM_BANDS - Optional

  For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

  For details on populating DIM_DATES dimension table, refer to Time Dimension Population, page 4-1 chapter.

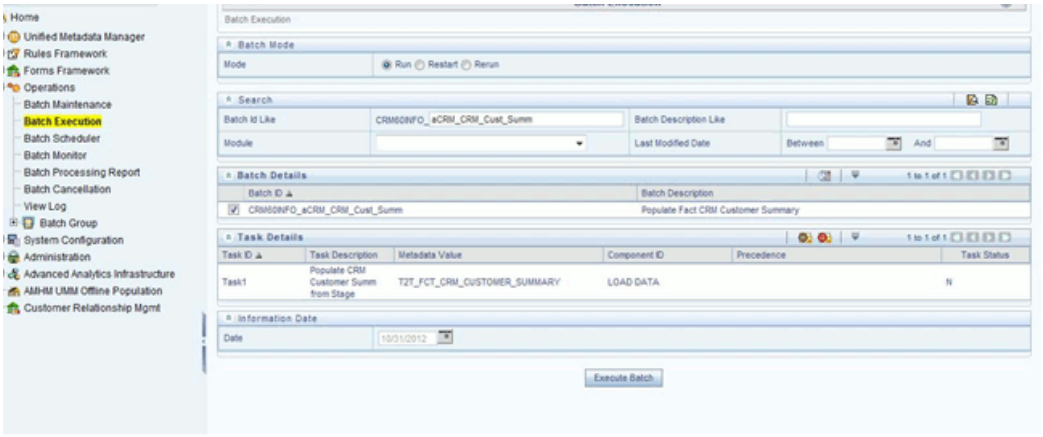
  For identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s), refer to*Download Specification* .

  For details on populating fact tables, refer to Fact CRM Customer Summary, page 9-

1 and Fact CRM Account Summary, page 7-7 sections.

Executing the Fact CRM Customer Summary Population T2Ts

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the Operations module of OFSAAI). A seeded batch, **<Infodom>_aCRM_CRM_Cust_Summ** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.

- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name "T2T_FCT_CRM_CUSTOMER_SUMMARY" you want to process.

8. Data file name will be blank for any Table to Table Load mode.
9. Default value refers to any parameter that has to be passed to T2T. It has to be blank.
10. Execute the batch created in the preceding steps.

For more information, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CRM_CUSTOMER_SUMMARY

> **Note:** For more information on configuration and execution of a Batch, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

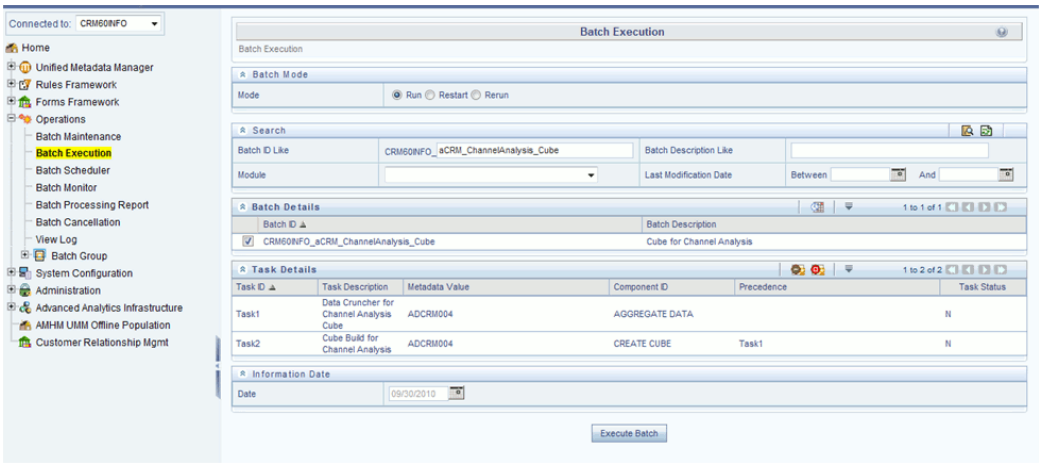
Update Fact CRM Customer Summary with Transaction Attributes

A seeded Data Transformation is provided with the installer which updates the entity Fact CRM Customer Summary with transaction attributes of customer such as ATM usage, Branch usage, net usage, POS usage, Number of ATM transactions, transacted amount, and so on.

The following table lists the seeded Post Load Transformation Definition with related Source and Destination tables:

DT Definition Name	Source Tables	Destination Table
FN_UPD_CRM_CUST_CHNL	FCT_TXN_CHANNEL	FCT_CRM_CUSTOMER_SUMMARY

A seeded batch, **<Infodom>_aCRM_Channel_UpdCRMCustomer** has to be executed for the required MIS Date.



Alternatively, you can define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI. For more information on defining a new Batch, refer to How to create New Batch, page D-1 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* screen.
2. Click **Add** (+) button from the *Task Details* grid.

   The *Task Definition* screen is displayed.
3. Enter the **Task ID** and **Description**.
4. Select the **TRANSFORM DATA** component from the **Components** drop down list.
5. In the Dynamic Parameters List, select the appropriate **Datastore Type** from the drop down list.
6. Select the appropriate **Datastore Name** from the drop down list. Usually it is the

Information Domain name.

7. Select the **IP Address** from the drop down list.

8. Select the Rule Name **FN_UPD_CRM_CUST_CHNL** from the drop down list.

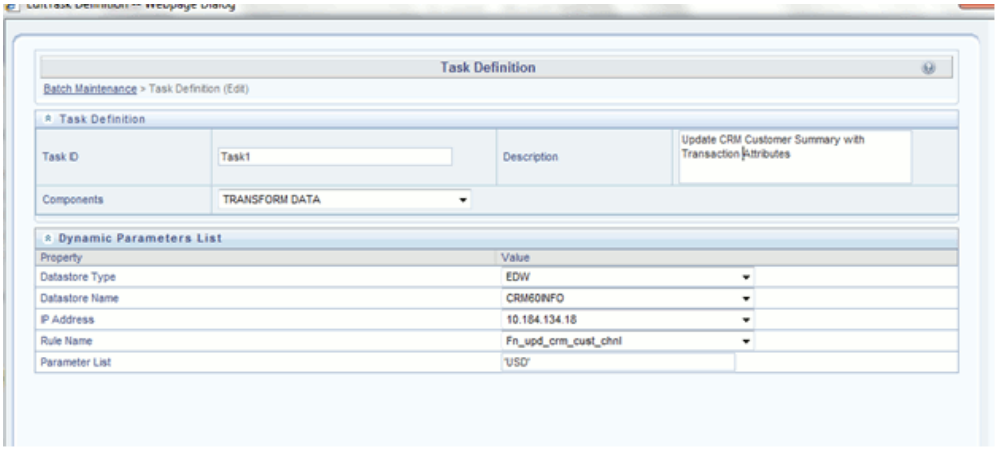
9. Enter the Parameter List details as mentioned below:

   - Reload Account Profitability table for the given MIS Date flag - can be Y or N within single quotes.

   - Reporting Currency code - This has to be enclosed within single quotes.

   For Example, if reporting currency is in US Dollar, then '**USD**' has to be specified.

   > **Note: Batch run ID** and **As Of Date** are passed internally by the batch to the Data Transformation task.



10. Execute the batch for which the Task has been created.

For more information, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the *Batch Monitor* screen of OFSAAI.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure

- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/date.

The file name will have the batch execution id.

> **Note:** For more information on configuration and execution of a batch, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Fact Partner Expense

Fact Partner Expense entity stores expense items like marketing cost, total project expense, business development expense, incentive, and so on that are incurred with the partner of financial institutions. These expenses are captured in the Stage Partner Expense entity for every partner and applicable time period.

Following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_PARTNER_EXPENSE	STG_PARTNER_EXPENSE	FCT_PARTNER_EXPENSE

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the tables.

Prerequisites

Following are the lists of tables used in the population of Fact Partner Expense and these are required to be loaded prior to executing the T2T:

- DIM_DATES
- DIM_PARTNER
- STG_PARTNER_EXPENSE

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

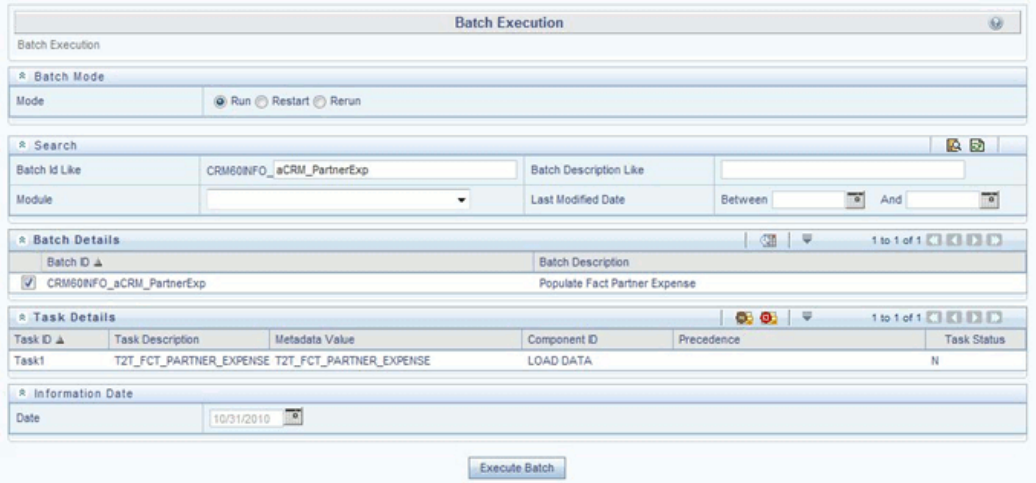
For details on populating DIM_DATES dimension table, refer to Time Dimension Population, chapter.

For identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s), refer to *Download Specification*.

Executing the Fact Partner Expense Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_PartnerExp** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.

- **IP address** - Select the IP address from the list.
- **Load Mode** - Select **Table to Table** from the list.
- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name "T2T_FCT_PARTNER_EXPENSE" you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD' Here 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_PARTNER_EXPENSE$

> **Note:** For more information on configuration and execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Fact Account Feature Map

A product might be facilitated with its own features. Fact Account Feature Map entity stores the mapping between the Account and Product Feature that is the features of the product availed by the customer account. Product processor tables in staging have information related to customer accounts.

Following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_ACCOUNT_FEATURE_MAP	STG_ACCT_FEATURE_MAP	FCT_ACCOUNT_FEATURE_MAP

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the tables.

Prerequisites

Following are the lists of tables used in the population of Fact Account Feature Map and these tables are required to be loaded prior to executing the T2T:

- DIM_DATES
- DIM_PRODUCT_FEATURE
- DIM_ACCOUNT
- DIM_CUSTOMER
- DIM_PRODUCT
- DIM_VENDOR
- DIM_CAMPAIGN
- DIM_CHANNEL
- STG_ACCT_FEATURE_MAP

For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information on populating account dimension, see Account Dimension

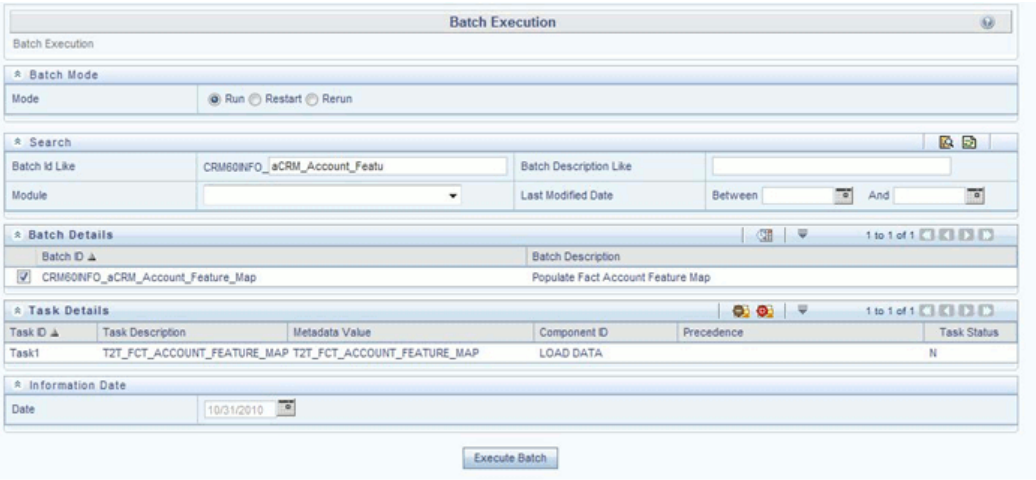
Population chapter.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

Executing the Fact Account Feature Map Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Account_Feature_Map** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.

- **Datastore Name** - Select the appropriate name from the list.
- **IP address** - Select the IP address from the list.
- **Load Mode** - Select **Table to Table** from the list.
- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name "T2T_FCT_ACCOUNT_FEATURE_MAP" you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. This should be blank.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_ACCOUNT_FEATURE_MAP$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Customer to Customer Relationship

Fact Customer to Customer Relationship entity stores the relationship between the customers. Example of relationship amongst customers could be Employer, Employee, Children, Parent, Spouse, and so on.

Following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_CUST_CUST_RELATION	STG_CUST_CUST_RELATIONSHIP	FCT_CUST_CUST_RELATIONSHIP

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the tables.

Prerequisites

Following are the lists of tables used in the population of Fact Customer to Customer Relationship and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_CUSTOMER
- STG_CUST_CUST_RELATIONSHIP

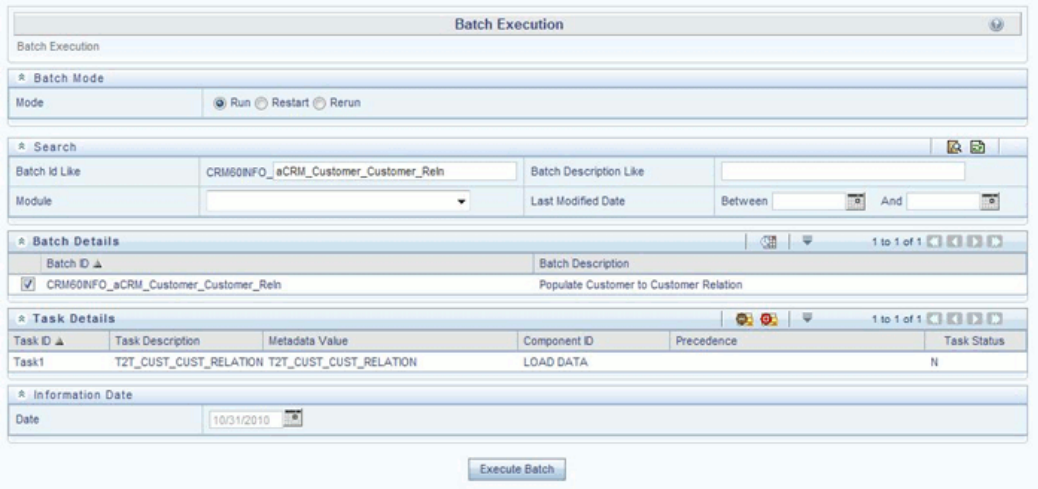
For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

Executing the Fact Customer to Customer Relationship Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Customer_Customer_Reln - Task1** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name "T2T_CUST_CUST_RELATION" you want to process.
8. Data file name will be blank for any Table to Table Load mode.

Default value refers to any parameter that has to be passed to T2T. This should be blank.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CUST_CUST_RELATIONSHIP$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Transaction Channel

Fact Transaction Channel entity stores the details of all transactions (successful and failed) done through any of the transaction channels offered by the Financial Institutions. This fact entity is loaded from multiple source staging tables.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_TEL_FCT_TXN_CHANNEL	STG_SRC_TB_TXNS	FCT_TXN_CHANNEL
T2T_POS_FCT_TXN_CHANNEL	STG_SRC_POS_TXNS	
T2T_NET_FCT_TXN_CHANNEL	STG_SRC_NET_TXNS	
T2T_BRA_FCT_TXN_CHANNEL	STG_SRC_BRANCH_TXNS	
T2T_ATM_FCT_TXN_CHANNEL	STG_SRC_ATM_TXNS	

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Transaction Channel and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_TXN_CHANNEL
- DIM_ACCOUNT
- DIM_AUTH_DECISION_REASONS
- DIM_BANDS
- DIM_BROWSER_TYPE
- DIM_CARD_TYPE
- DIM_CURRENCY
- DIM_CUSTOMER
- DIM_CUSTOMER_TYPE

- DIM_GEOGRAPHY
- DIM_MERCHANT
- DIM_MERCHANT_CATEGORY
- DIM_PRODUCT
- DIM_TERMINAL
- DIM_TERMINAL_TYPE
- DIM_TRANSACTION
- DIM_TXN_FAILURE_REASON
- DIM_TXN_STATUS
- STG_SRC_ATM_TXNS
- STG_SRC_BRANCH_TXNS
- STG_SRC_NET_TXNS
- STG_SRC_POS_TXNS
- STG_SRC_TB_TXNS

For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

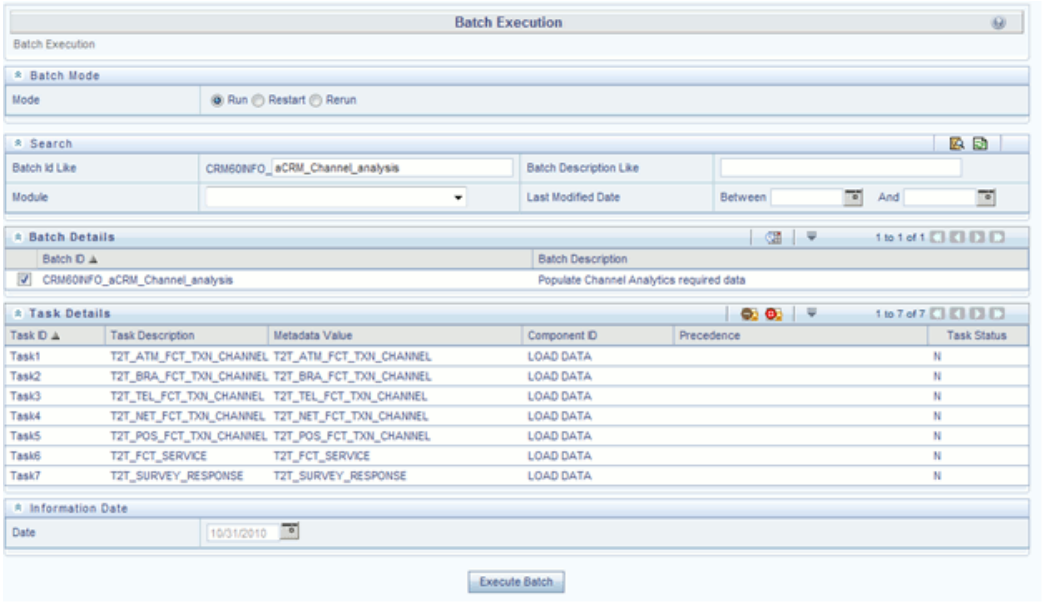
For more information on populating account dimension, see Account Dimension Population chapter.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Channel Transaction tables in staging for the purpose of Customer Insight Application(s).

Executing the Fact Transaction Channel Population T2Ts

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Channel_analysis Task1 to Task5** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name for the source stage channel table you want to

process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD', [DLCY]='USD'

   Here, 'USD' acts as currency parameter to T2T.

9. Steps 4 to 8 must be repeated for adding the remaining 4 T2Ts within the same batch definition.

10. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_TXN_CHANNEL$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Sales Representative Compensation

Fact Sales Representative Compensation entity stores the sales incentive compensation

paid for a sales representative against a product. The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_STG_SALES_REP_COMPENSATION	STG_SALES_REP_COMPENSATION	FCT_SALES_REP_COMPENSATION

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Sales Representative Compensation and these tables are required to be loaded prior to running the T2T.

- DIM_DATES
- DIM_PRODUCT
- DIM_SALES_REPRESENTATIVE
- STG_SALES_REP_COMPENSATION

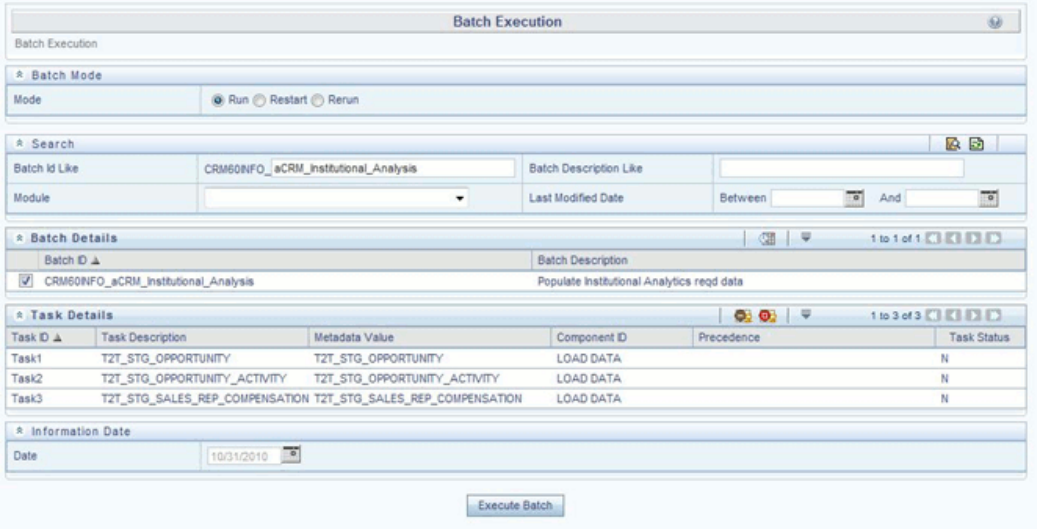
For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Channel Transaction tables in staging for the purpose of Customer Insight Application(s).

Executing the Fact Sales Representative Compensation Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Institutional_Analysis – Task3** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_STG_SALES_REP_COMPENSATION', you want to process.
8. Data file name will be blank for any Table to Table Load mode.

Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

For example, default value is [DRCY]='USD'

Here, 'USD' acts as reporting currency parameter to T2T

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_SALES_REP_COMPENSATION$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Application

Fact Application entity stores the fact data of applications like application details, current stage, status, rejection reason, time-taken in each stage, and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_APPLICATION	STG_APPLICATION	FCT_APPLICATION

For more information and to view the detailed structure of the earlier tables, see *Customer Insight Erwin Data Model*.

Prerequisites

Following are the lists of tables used in the population of Fact Application. These tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_APPLICATION_TYPE
- DIM_PRODUCT
- DIM_CREDIT_OFFICER
- DIM_CUSTOMER
- DIM_CHANNEL
- DIM_CREDIT_CENTER
- DIM_DECISION_STATUS
- DIM_GEOGRAPHY
- DIM_INDUSTRY
- DIM_APPLICATION_REJECT_REASONS
- DIM_PROFESSION
- DIM_HOME_OWNERSHIP
- DIM_EDUCATION
- DIM_MARITAL_STATUS
- DIM_DEVIATION_REASONS
- DIM_SALES_REPRESENTATIVE

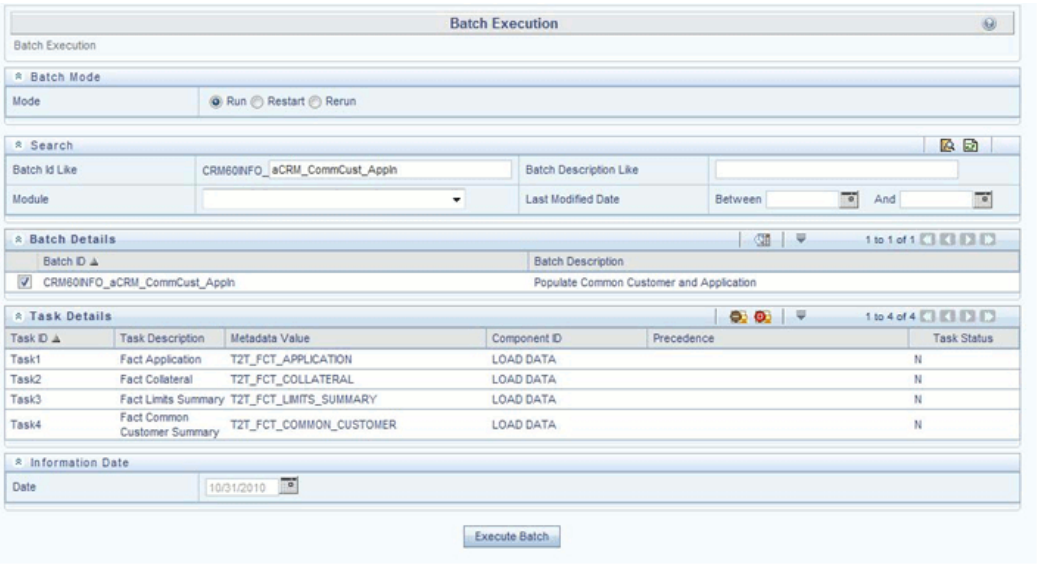
- DIM_CAMPAIGN
- DIM_ACCOUNT
- DIM_PROSPECT
- DIM_BANDS
- STG_APPLICATION

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

For details on populating DIM_DATES dimension table, refer to Time Dimension Population, chapter. For identifying fields required in Channel Transaction tables in staging for the purpose of Customer Insight Application(s), refer to *Download Specification*.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through *Operations* module), a seeded batch, **<Infodom>_aCRM_CommCust_Appln – Task1** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.

3. Click **Save**.

4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.

5. Enter the **Task ID** and **Description**.

6. Select **Load Data** from the Components list.

7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_FCT_APPLICATION', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure

- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_APPLICATION$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Service

Fact Service entity stores the details of the service requests logged across the life cycle of Service request. It stores information like request type, status of service requests, service request processing time lines, inbound and outbound service activities details, service requested product, service representative, service request channels, priority & severity levels of service requests, and so on..

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_SERVICE	STG_SERVICE	FCT_SERVICE

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Service and these tables are required to be loaded prior to running the T2T:

- DIM_ACCOUNT
- DIM_BANDS
- DIM_CHANNEL_TXN
- DIM_CUSTOMER

- DIM_DATES
- DIM_GEOGRAPHY
- DIM_LOB
- DIM_OFFER
- DIM_PRODUCT
- DIM_PRODUCT_CATEGORY
- DIM_PRODUCT_TYPE
- DIM_REQUEST_TYPE
- DIM_RETENTION_OFFER_TYPE
- DIM_SERVICE_REPRESENTATIVE
- DIM_SERVICE_SLIPPAGE_REASON
- STG_SERVICE

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

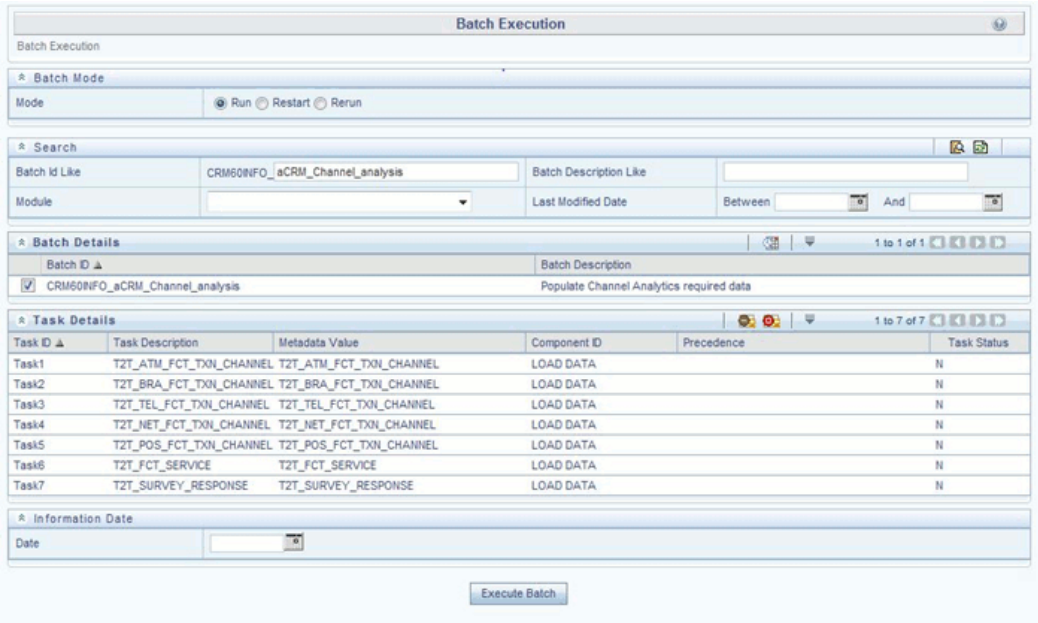
For details on populating DIM_DATES dimension table, refer to Time Dimension Population, chapter.

For identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s), refer to *Download Specification*.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Channel_analysis – Task6** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
    - **Datastore Type** - Select the appropriate datastore from the list.
    - **Datastore Name** - Select the appropriate name from the list.
    - **IP address** - Select the IP address from the list.
    - **Load Mode** - Select **Table to Table** from the list.
    - **Source Name** - Select **<T2T Source Name>** from the list.
    - **File Name** - Select the T2T name 'T2T_FCT_SERVICE', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_SERVICE$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Survey Response

Fact Survey Response entity stores all the responses for a survey conducted across all survey types. It stores information like Overall satisfaction score, Service representative knowledge score, Service quality score, and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_SURVEY_RESPONSE	STG_SURVEY_RESPONSE	FCT_SURVEY_RESPONSE

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Service and these tables are required to be loaded prior to running the T2T:

- DIM_CAMPAIGN_CHANNEL
- DIM_CUSTOMER
- DIM_DATES
- DIM_SERVICE_REPRESENTATIVE
- DIM_SURVEY
- STG_SURVEY_RESPONSE

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

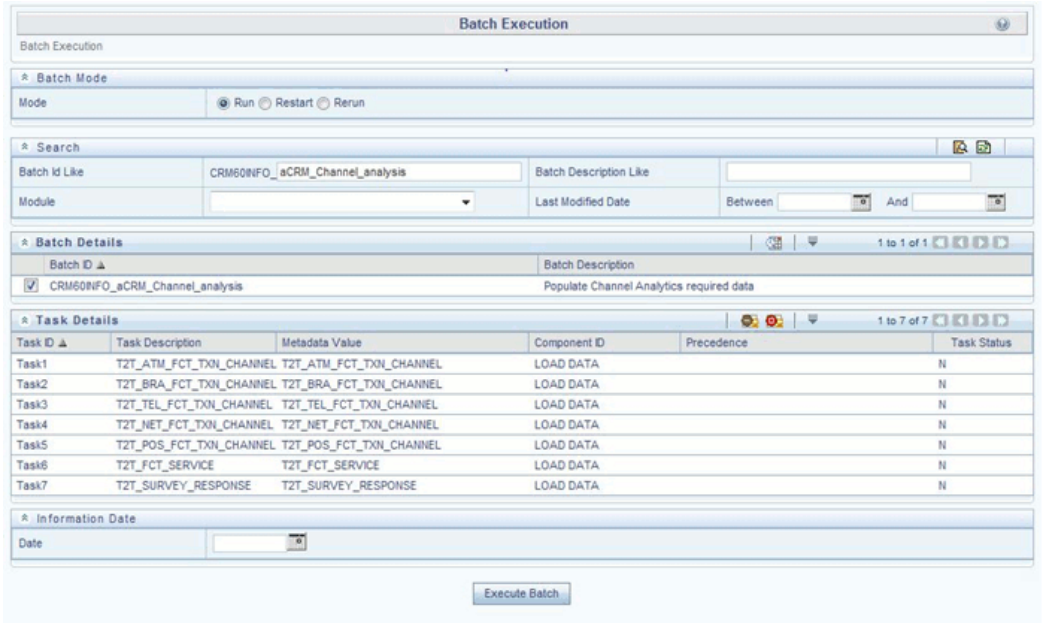
For details on populating DIM_DATES dimension table, refer to Time Dimension Population, chapter.

For identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s), refer to *Download Specification*.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Channel_analysis – Task7** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_SURVEY_RESPONSE', you want to

process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_SURVEY_RESPONSE$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

10

Cube Build Process

Introduction

Reports of OFSCA application can be configured to work on Relational database or Essbase cubes. Source of data for the reports is determined by the priority set for each Logical Table Source (LTS) in OBIEE RPD. Multi-dimensional databases store aggregated data for better performance and provide mechanisms for performing non-additive rollup within a hierarchy and defining complex derived measures using cross-dimensional operations. OFSAA Infrastructure is used for defining metadata about the cube and for building the cubes. Cubes are optional source of data for Channel Analytics application.

Overview of Cubes

OFSCA application has the following seeded cubes:

- Channel Analysis
  - Purpose

    The purpose of this cube is to provide analysis of various transactions related measures across dimensions like Product, purchase category, transaction failure reason, and so on.

  - Dataset

    This cube is based on the FCT_TXN_CHANNEL fact table.

- Service Analysis
  - Purpose

    The purpose of this cube is to provide analysis of various Service related measures across dimensions like Line of business, product, Service request type, service slippage reason, and so on.

- Dataset

  This cube is based on the FCT_SERVICE fact table.

Creating Configuration Files

Each cube has a configuration file that contains the details of dimensions and measures which are part of the cube. Essbase outline is created using the configuration file. Configuration files for seeded cubes are available as part of the installer. However, if there are any changes to cube definition then configuration files are recreated during saving of the cube definition.

Follow these steps:

1. On the LHS menu of OFSAAI, go to **Home > Unified Metadata Manager > Business Metadata Management > Cubes**.
2. Click **Search** and check if you can see the cubes in the pop up window that opens.
3. Click on the cube that needs to be built and click OK to return to the Cube Definition Screen.
4. Click **Save** to save the cube. A pop up appears saying 'Operation Successful'.

   Note: Cube definition will be saved only when the UI component detects any change event. In order to trigger the change event, type a blank space in 'Long Description' text-box and remove the same. Instead, you can remove a dimension from the selected list, re-select the same dimension to apply the variation on it, and save the same.

Building Of Cubes

The Cube build process in OFSAA Infrastructure contains the following steps:

- Generating an aggregate DATA file containing the measure values for each dimension leaf that are part of the cube definition. This is performed by the **AGGREGATE DATA** component task within the batch definition.
- Creating the cube outline on Essbase server. This is performed by the **CREATE CUBE** component task within the batch definition.
- Loading the data to the cube. This is performed by the **CREATE CUBE** task within the batch definition.

This section covers the following topics:

- Prerequisites
- Tables used by the Cube build component
- Executing the Cube build task
- Checking the execution status

Prerequisites

Following are the prerequisites for creating a cube:

- All the post install steps mentioned in the *OFSAA Infrastructure Installation Guide* and *Solution Installation Manual* have been completed successfully.
- Parentage files need to be created for BI hierarchies after dimension data is loaded. 'Resave Metadata' process is used to create the parentage files.
- OFSAAI application user needs to have the required functions mapped to the user for doing Resave Metadata and accessing the **Home> Unified Metadata Manager > Business Metadata Management** screens and executing a batch from Application batch operations screen.
- Execute Save Metadata by navigating to the following screen on the OFSAAI framework LHS Menu.
  - Navigate to **Home > Administration > Save Metadata**.
  - Choose all the available metadata under Hierarchy and move it to the right by using the '>>' button.
  - Click **Save** .
  - Click **Show Details** to view the log for the Save operation.

    Saving metadata creates all the parentage files required for building cubes.

    Note: For details on the Resave metadata feature, refer to *System Configuration* and *Administration* chapters in *Oracle Financial Services Analytical Applications Infrastructure User Manual*.

- Ensure that the following services are running on the application server before doing a cube build:
  - Iccserver
  - Router

- AM
- Messageserver
- Olapdataserver

- Batches need to be created for executing, which is explained in the Executing the Cube build section.
- All the required tables for dataset need to be populated before you execute the cube batches, such as Dimension Population, Time Dimension population, Account Summary Population, and Fact Ledger Population.
- The dataset for the cube should return some rows in the database for the cube build to happen.

  To check the same, perform the following steps:

  - Navigate to **Home > Unified Metadata Manager > Business Metadata Management > Data Sets**.
  - Click **Search**.
  - Click any dataset in the pop up which opens and click **OK** to return to the *Data Set* window.
  - Click the button on right of ANSI Join text box. Enter the required expression or click the **Browse** button to define an expression using the *Expression* window.
  - Click **OK** to return to the *Data Set* window.

  For more information, refer to *Create Expression* section in *OFSAA Infrastructure User Guide*.
- Perform the same for Join/Filter Condition and Date filter.
- Frame an SQL query as metioned below:

  ```
  SELECT COUNT(1) FROM <ENTER THE PART YOU OBTAINED FROM ANSI JOIN
  PART ABOVE>WHERE<ENTER THE PART YOU OBTAINED FROM JOIN/FILTER
  CONDITION & DATE FILTER PARTS>
  ```

  This query shows the record count greater than zero when you fire this from SQL prompt in the database.

Tables Used by the Cube Build Component

Tables that are part of the dataset need to be populated before executing the cube build component. In addition, REV_BIHIER table in atomic database schema stores the hierarchy data for Business Intelligence-enabled hierarchies for cube build. This table

gets populated when a hierarchy is saved using *Save Metadata* screen.

Executing the Cube Build Task

To execute the cube build process from OFSAAI ICC framework (accessed through the application Batch Operations screen), create a new Batch with two tasks - one for performing Data crunching (component is Aggregate Data) operations and another for building cube (component is Build Cube). The above batch needs to be created for each of the cubes.

Aggregate Data Task

1. From OFSAAI Home menu, select Operations > Batch Maintenance.
2. Click New Batch ('+' symbol in Batch Name container) and enter the Batch Name and Description.
3. Click Save.
4. Select the Batch you created in the earlier step by clicking on the check box in the Batch Name container.
5. Click New Task ('+' symbol in Task Details container).
6. Enter the Task ID and Description.
7. In the Component drop down, choose Aggregate Data.
8. Select the following from the Dynamic Parameters List and then click Save:
   - Datastore Type - Select the appropriate datastore from the list.
   - Datastore Name - Select the appropriate name from the list.
   - IP address - Select the IP address from the list.
   - Cube Parameter - Choose the cube code to be built from the drop down list.
   - Operation - Choose All from the drop down list.

Create Cube Task

1. In the batch created in Aggregate Data task above, click New Task ('+' symbol in Task Details container).
2. Enter the Task ID and Description.
3. In the Component drop down, choose Create Cube.

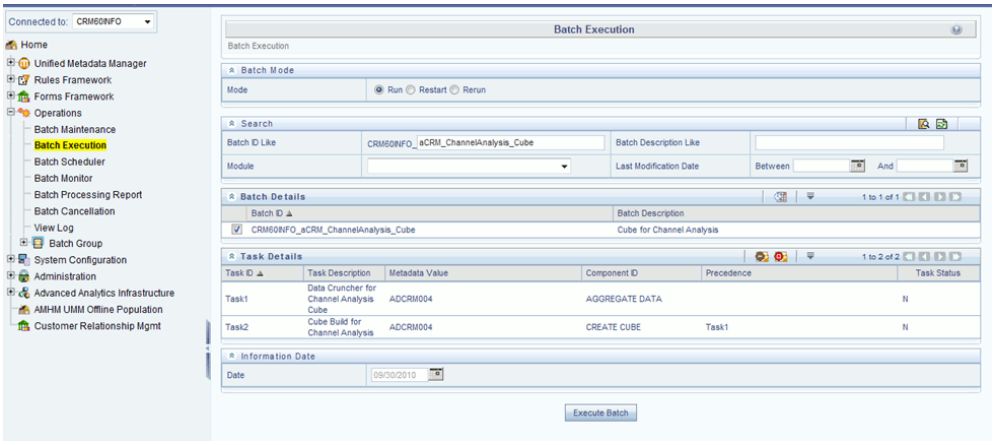
4. Select the following from the Dynamic Parameters List and then click Save:
   - Datastore Type - Select the appropriate datastore from the list.
   - Datastore Name - Select the appropriate name from the list.
   - IP address - Select the IP address from the list.
   - Cube Parameter - Choose the cube code to be built from the drop down list.
   - Operation - Choose All from the drop down list.
5. Execute the batch created in the above step.

   Note: A common issue in the Aggregate task is Data Set not having records for which the steps mentioned in the prerequisites have to followed or the SQL query in Data Cruncher log file has to be checked on the database (Location of log file mentioned in the 'Checking the Execution Status' section below). In the Create Cube task one common error is the hierarchy member being the same for two different dimensions which are part of the same cube (Error message: 'Duplicate Alias' in the Create Cube log file). In this case, you can try appending a string to the Hierarchy member code so that it is unique across the cube or changing the hierarchy data to make the node unique across the cube.

Seeded batches are provided along with the CA application installer. The below described are the OFSCA seeded batches:

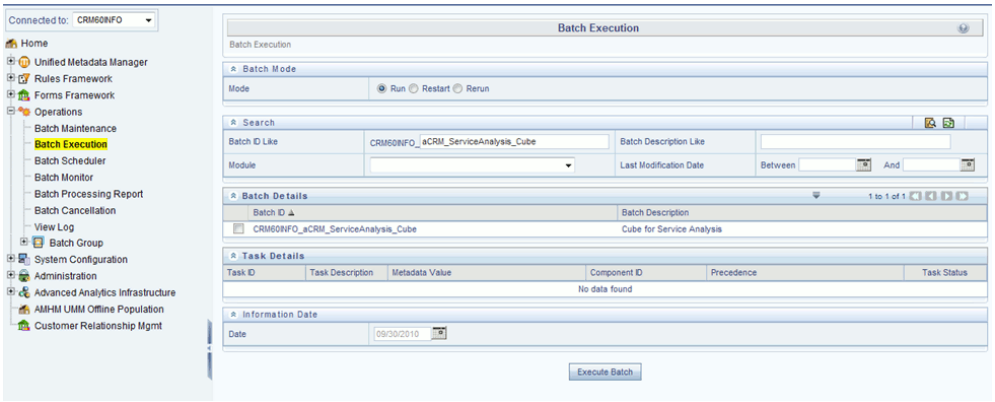
- Channel Analysis

  Seeded batch **<Infordom>_aCRM_ChannelAnalysis_Cube** is provided with the installer. Execute the batch for the required MIS Date.



- Service Analysis

  Seeded batch **<Infodom>_aCRM_ServiceAnalysis_Cube** is provided with the installer. Execute the batch for the required MIS Date.



Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen. From OFSAAI Home menu, select Operations > Batch Monitor.

For a more comprehensive coverage of configuration and execution of a batch, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

The status messages in Batch Monitor are:

- N - Not Started
- O - On Going
- F - Failure

- S - Success

The execution log can be accessed on the application server in the directory *$FIC_DB_HOME/log/dc* for the Task 1 above (Aggregate Data). The file name will have the Batch Execution ID.

The execution log can be accessed on the application server by going to the following directory *$FIC_DB_HOME/log/olap* for the Task 2 above (Create Cube). The file name will have the Batch Execution ID.

> **Note:** : Refer to How to Develop a New Cube, page C-1 on how to add a New cube or modifying existing ones. For any new cube created using the OFSAAI framework *Cube* window , the tasks for execution are the same as mentioned above.

11

Overview of OFSCA Reports

Introduction to Dashboards

Oracle Financial Services Channel Analytics (OFSCA) offers dashboards to users that organize different kinds of reports by subject area.

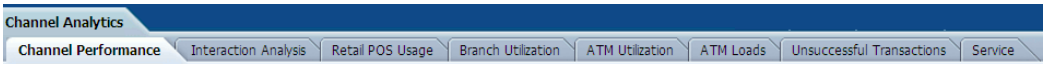
These reports present:

- ATM/POS (Point of Sale) transaction analysis.
- Channel performance and Operational metrics to optimize channel capacity, such as transaction loads on ATM, Branch, Call center, Chat, and so on.
- Branch transaction analysis.
- Understanding of any underlying customer skews in channel preferences that is affinity of most profitable segment for certain channels.
- Understanding increased frequency of touch-points in specific customer segments and so on.
- Cross-channel performance analysis (like customer preferences for specific channels for different transactions) to enable migration to self-servicing on low-cost channels.
- Optimize Channel Investments to ensure high customer satisfaction and hence achieve long term engagement with the customer.
- Enable operation efficiencies and optimal customer experience with a deep understanding of the multi-channel interactions of the customer and related performance.

Dashboards

Following tabs are present in the institutional performance dashboard:

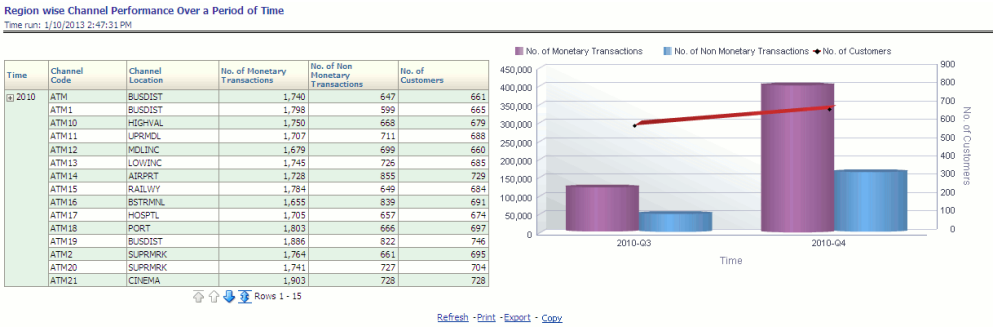
- **Channel Performance**
- **Interaction Analysis**
- **Retail POS Usage**
- **Branch Utilization**
- **ATM Utilization**
- **ATM Loads**
- **Unsuccessful Transactions**
- **Service**



Channel Performance

- Region wise Channel Performance Over a Period of Time

  This report outlines the number of monetary and non-monetary transactions supported by a channel for a certain number of customers over time.



Time	Channel Code	Channel Location	No. of Monetary Transactions	No. of Non Monetary Transactions	No. of Customers
2010	ATM	BUSDIST	1,740	647	661
	ATM1	BUSDIST	1,798	599	665
	ATM10	HIGHVAL	1,750	668	679
	ATM11	UPRMDL	1,707	711	688
	ATM12	MDLINC	1,679	699	660
	ATM13	LOWINC	1,745	726	685
	ATM14	AIRPRT	1,728	855	729
	ATM15	RAILWY	1,784	649	684
	ATM16	BSTRMNL	1,655	839	691
	ATM17	HOSPTL	1,705	657	674
	ATM18	PORT	1,803	666	697
	ATM19	BUSDIST	1,886	822	746
	ATM2	SUPRMRK	1,764	661	695
	ATM20	SUPRMRK	1,741	727	704
	ATM21	CINEMA	1,903	728	728

- Customer Contacts by Channel and Customer Segments

  This report provides insights into the demographics of the customers using the channel and the type of transactions (monetary or non-monetary) supported for those demographics.

Customer Contacts by Channel and Customer Segments

Time run: 1/10/2013 4:30:36 PM

Customer Segments Age

Analyze by No. of Monetary Transactions

	No. of Monetary Transactions							
	Less than 25 years	25 - 30 years	30 - 40 years	40 - 50 years	50 - 60 years	60 - 100 years	Age Missing	Age Others
Service Channel								
ATM	11,270	22,351	22,718	22,440	22,479	22,789	22,445	11,171
BRANCH	2,757	5,531	5,444	5,446	5,580	5,585	5,422	2,725
INTERNET	249	520	516	460	498	484	504	246
KIOSK	1,274	2,446	2,578	2,370	2,419	2,518	2,456	1,184
MOBILE	119	192	209	226	210	214	232	133
POS	20,981	41,714	42,510	41,662	41,828	42,448	42,053	21,105
TB	832	1,716	1,731	1,684	1,673	1,763	1,830	873

Refresh - Print - Export - Copy

- Analysis of Time Spent

  This report provides the Average number of contacts and Average time spent across each bank channels split across various demographic segments like Age, Gender, and Income.

Analysis of Time Spent

Time run: 1/10/2013 4:30:36 PM

Customer Segments Age

Analyze by Avg No. of Contacts per Customer

	Avg No. of Contacts per Customer							
	Less than 25 years	25 - 30 years	30 - 40 years	40 - 50 years	50 - 60 years	60 - 100 years	Age Missing	Age Others
Service Channel								
ATM	16,587	32,968	33,267	33,106	33,015	33,483	33,167	16,392
BRANCH	4,068	8,080	7,968	8,089	8,021	8,219	8,044	4,020
INTERNET	372	768	755	692	729	736	745	343
KIOSK	1,844	3,621	3,772	3,526	3,612	3,717	3,621	1,783
MOBILE	175	314	306	328	320	316	361	185
POS	30,961	61,559	62,558	61,339	61,789	62,488	62,266	31,141
TB	1,233	2,544	2,610	2,563	2,535	2,609	2,673	1,287

Refresh - Print - Export - Copy

- Product Performance by Vintage and Origination Channel

  This report enables the understanding of any bias displayed by customers of different vintages for specific channels at the time of origination.

- Multi-Channel Interaction

  This report provides an understanding of the spread of customers interacting across multiple channels and corresponding demographic information.

Multi-Channel Interaction

Time run: 1/10/2013 4:30:36 PM

Customer Segments: Age

Analyze by: No. of Customers

	No. of Customers							
	Less than 25 years	25 - 30 years	30 - 40 years	40 - 50 years	50 - 60 years	60 - 100 years	Age Missing	Age Others
Channel								
ATM	731	1,449	1,428	1,413	1,377	1,423	1,472	714
Advertisements	733	1,380	1,411	1,430	1,468	1,391	1,431	743
Branch Walk-ins	677	1,449	1,436	1,412	1,449	1,432	1,383	687
Corporate Selling	703	1,510	1,441	1,388	1,380	1,394	1,421	755
Customer Referral	707	1,360	1,427	1,410	1,364	1,352	1,375	689
Direct Mailing	724	1,371	1,438	1,438	1,428	1,441	1,501	698
Institutional Sales - POS	730	1,383	1,383	1,378	1,347	1,386	1,402	680
Internet	724	1,433	1,431	1,428	1,430	1,410	1,460	723
Merchandising	688	1,439	1,467	1,470	1,483	1,371	1,405	709
Miscellaneous	716	1,414	1,401	1,499	1,402	1,417	1,407	678
Telebanking	733	1,459	1,442	1,456	1,485	1,457	1,408	761
	21	32	23	29	31	28	25	15

Refresh - Print - Export - Copy

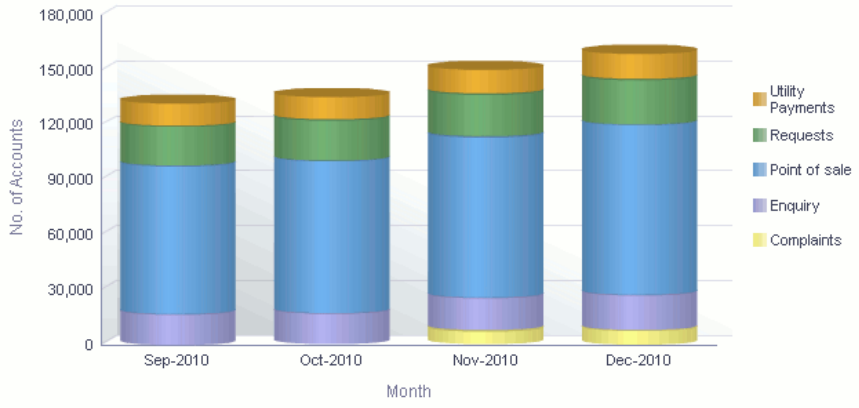
Interaction Analysis

- Top 20 Service Types

  The report displays the top 20 service types that resulted in a customer interaction seen as a trend over time.

Top 20 Service Types

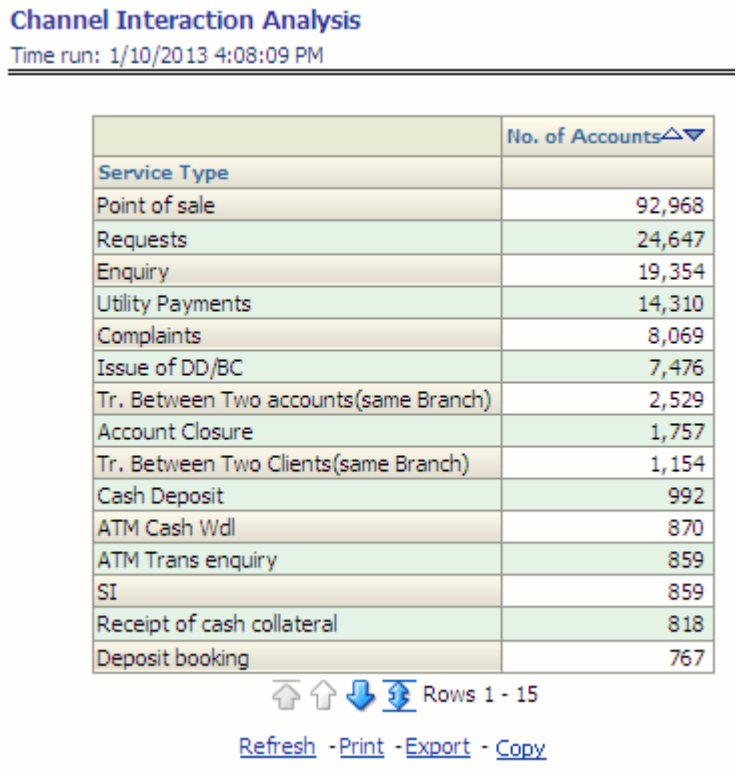
Time run: 1/10/2013 4:08:09 PM



Refresh - Print - Export - Copy

- Channel Interaction Analysis

  This report displays the number of accounts associated with the top service types.



Channel Interaction Analysis

Time run: 1/10/2013 4:08:09 PM

Service Type	No. of Accounts
Point of sale	92,968
Requests	24,647
Enquiry	19,354
Utility Payments	14,310
Complaints	8,069
Issue of DD/BC	7,476
Tr. Between Two accounts(same Branch)	2,529
Account Closure	1,757
Tr. Between Two Clients(same Branch)	1,154
Cash Deposit	992
ATM Cash Wdl	870
ATM Trans enquiry	859
SI	859
Receipt of cash collateral	818
Deposit booking	767

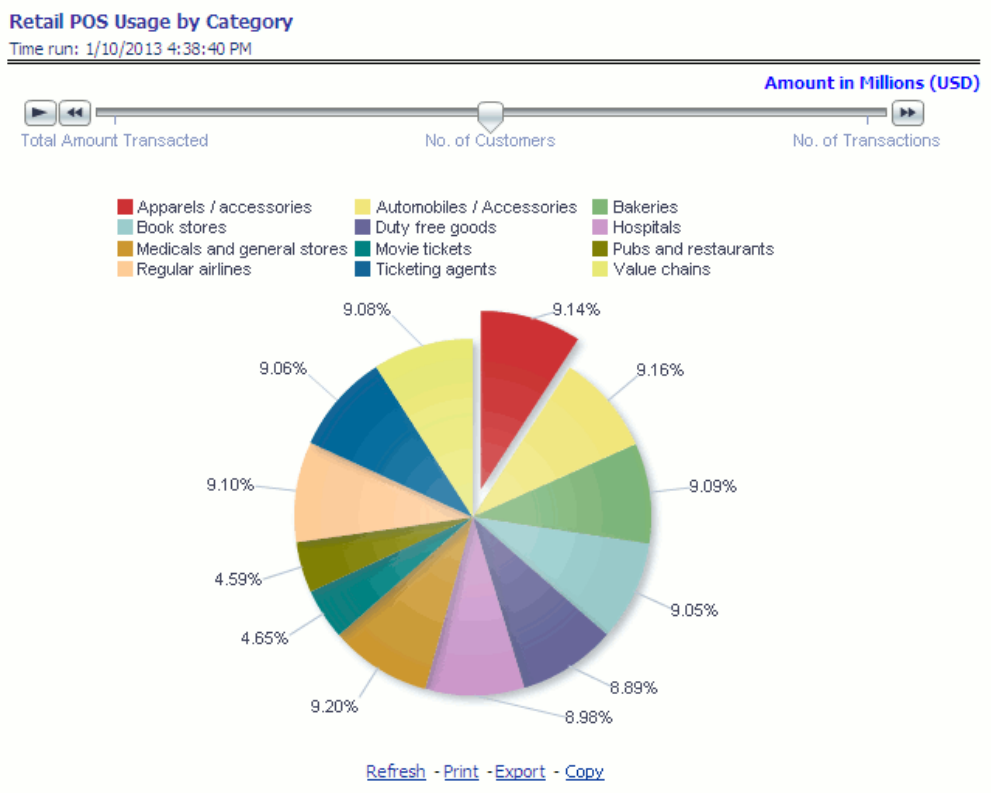
Rows 1 - 15

Refresh -Print -Export - Copy

Retail POS Usage

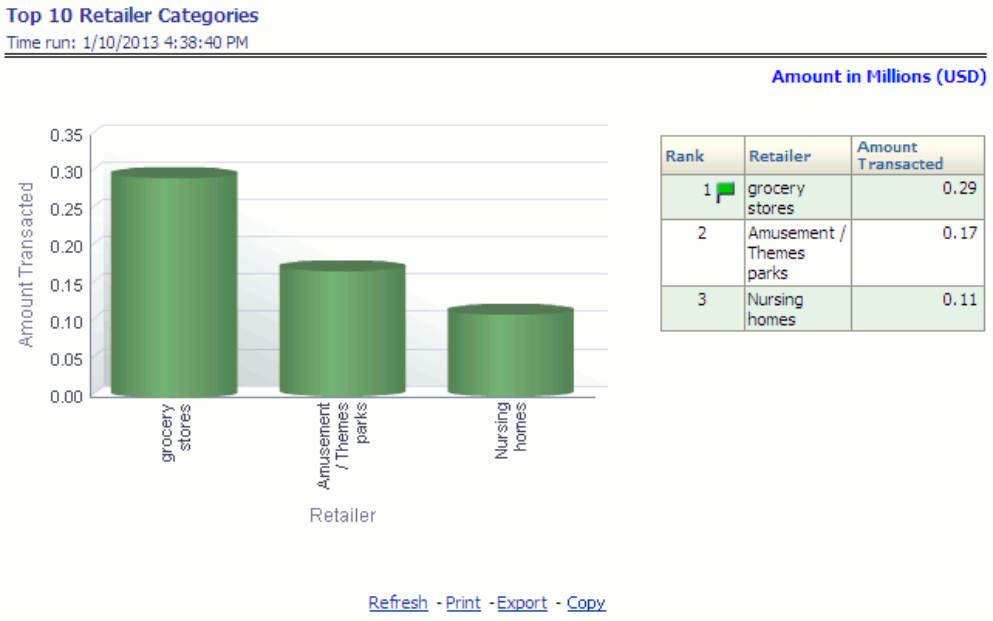
- Retail POS Usage by Category

  This report displays the distribution of Retail POS transactions across various categories.



- Top 10 Retailer Categories

  This report displays the top 10 Categories of Retail POS Spend.



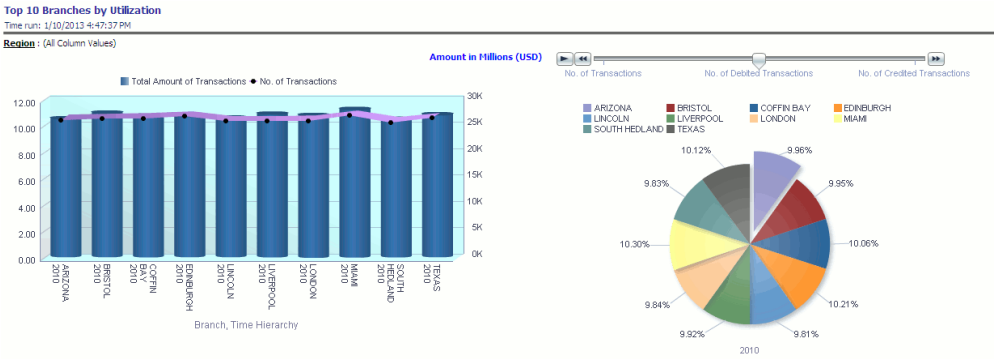
Branch Utilization

- Branch Utilization by Region

  This report displays utilization statistics for branches in a selected reason. The report outlines the total amount debited, total amount credited, as well as number of customers generating those transactions as a trend report over time.

- Top 10 Branches by Utilization

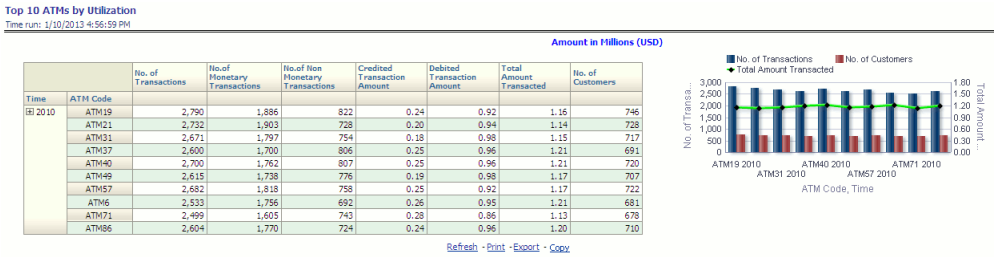
  This report displays the top 10 Branches in the region as a measure of its utilization.



ATM Utilization

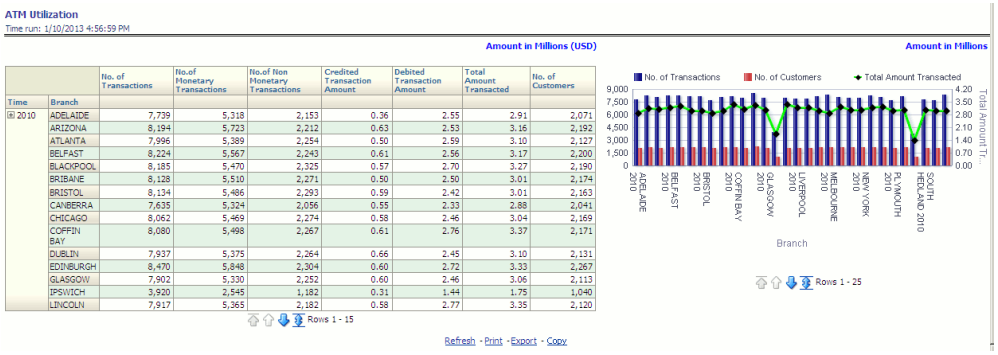
- Top 10 ATMs by Utilization

  This report displays the Top 10 ATMs as a measure of its utilization.



- ATM Utilization

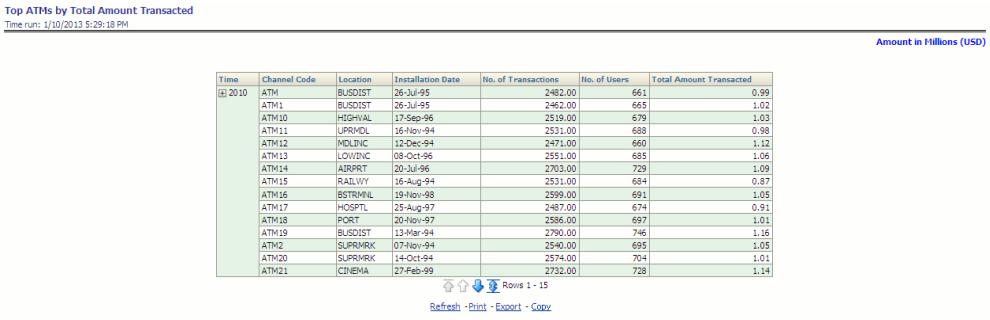
  This report displays Utilization statistics for ATMs in a selected reason. The report outlines the Number of Monetary, Non-monetary, and Total Transactions in addition to total amount debited, total amount credited as well as number of customers generating those transactions as a trend report over time.



ATM Loads

- Top ATMs by Total Amount Transacted

  This report is intended to provide the bank user a good understanding of the most used ATMs as a measure of the amount transacted.



Top ATMs by Total Amount Transacted

Time run: 1/10/2013 5:29:18 PM

Amount in Millions (USD)

Time	Channel Code	Location	Installation Date	No. of Transactions	No. of Users	Total Amount Transacted
⊞ 2010	ATM	BUSDIST	26-Jul-95	2482.00	661	0.99
	ATM1	BUSDIST	26-Jul-95	2462.00	665	1.02
	ATM10	HIGHVAL	17-Sep-96	2519.00	679	1.03
	ATM11	UPRMDL	16-Nov-94	2531.00	688	0.98
	ATM12	MDLINC	12-Dec-94	2471.00	660	1.12
	ATM13	LOWINC	08-Oct-96	2551.00	685	1.06
	ATM14	AIRPRT	20-Jul-96	2703.00	729	1.09
	ATM15	RAILWY	16-Aug-94	2531.00	684	0.87
	ATM16	BSTRMNL	19-Nov-98	2599.00	691	1.05
	ATM17	HOSPTL	25-Aug-97	2487.00	674	0.91
	ATM18	PORT	20-Nov-97	2586.00	697	1.01
	ATM19	BUSDIST	13-Mar-94	2790.00	746	1.16
	ATM2	SUPRMRK	07-Nov-94	2540.00	695	1.05
	ATM20	SUPRMRK	14-Oct-94	2574.00	704	1.01
	ATM21	CINEMA	27-Feb-99	2732.00	728	1.14

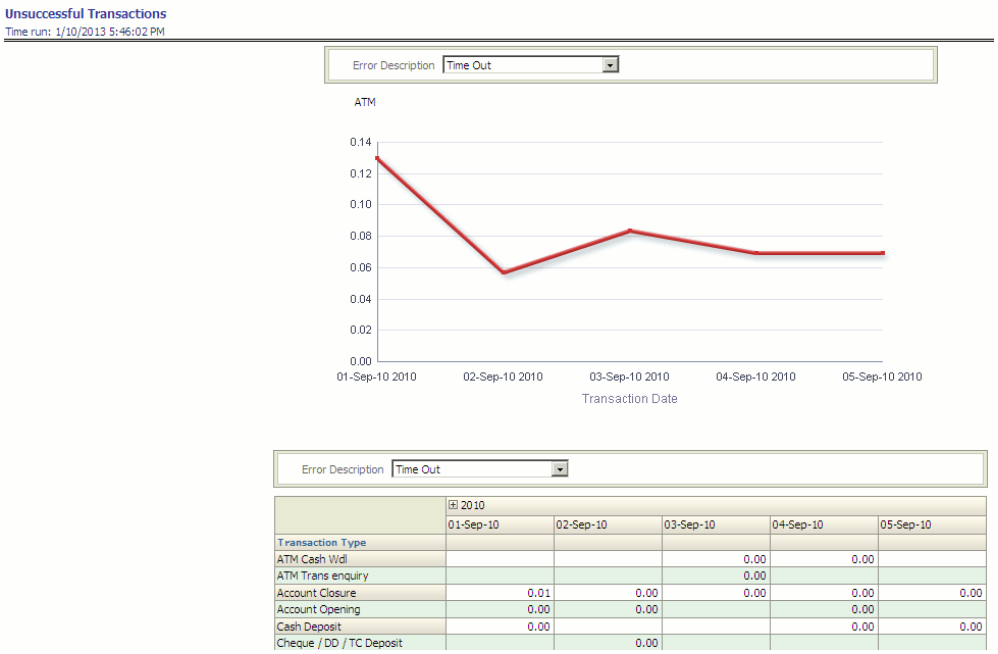
Rows 1 - 15

Refresh - Print - Export - Copy

Unsuccessful Transactions

- Unsuccessful Transactions

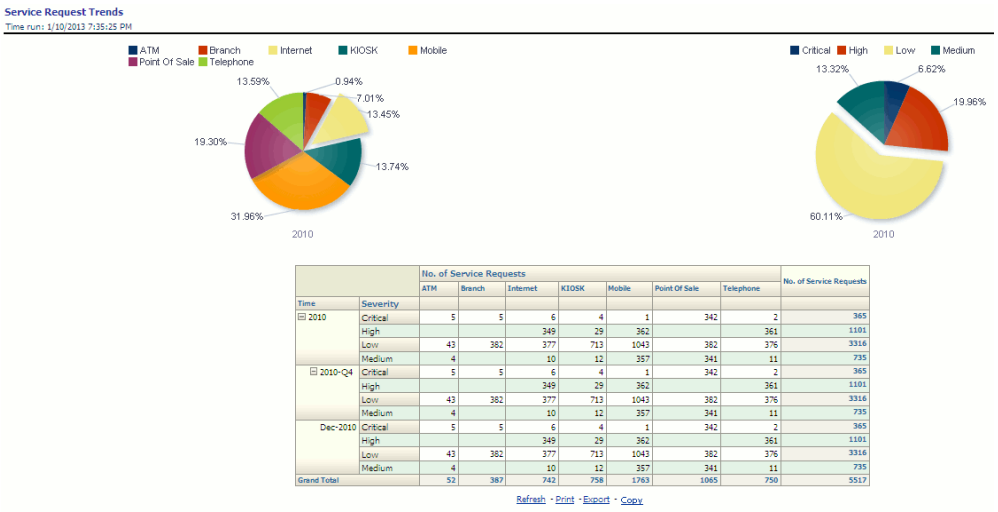
  This is a trend report that tracks the various errors within a channel over time.



Service

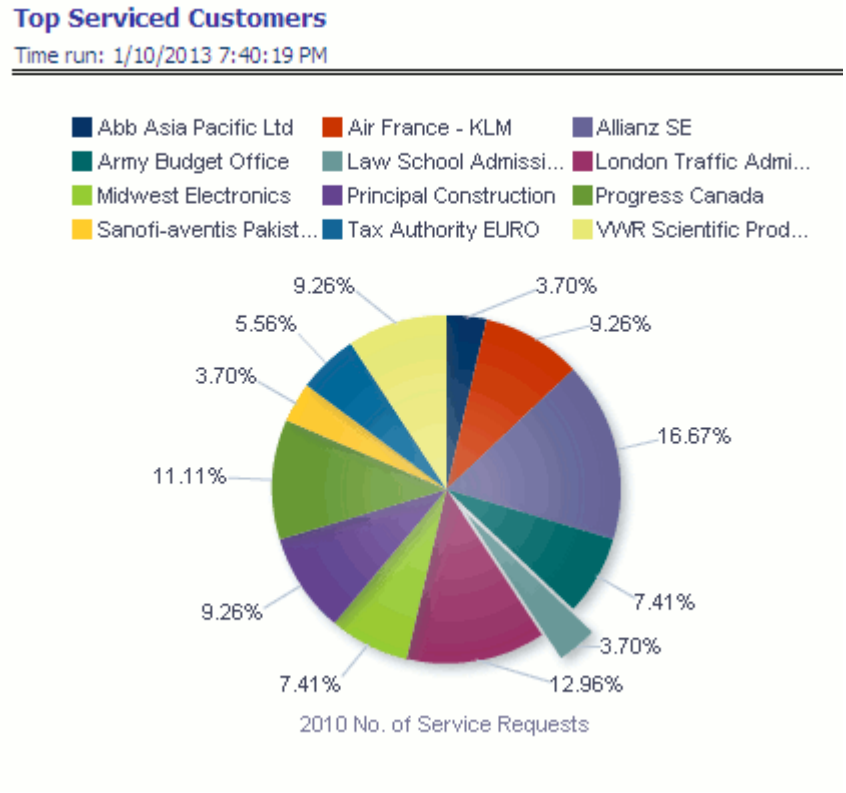
- Service Request Trends

  A trend report of Service Requests generated across various channels over time.



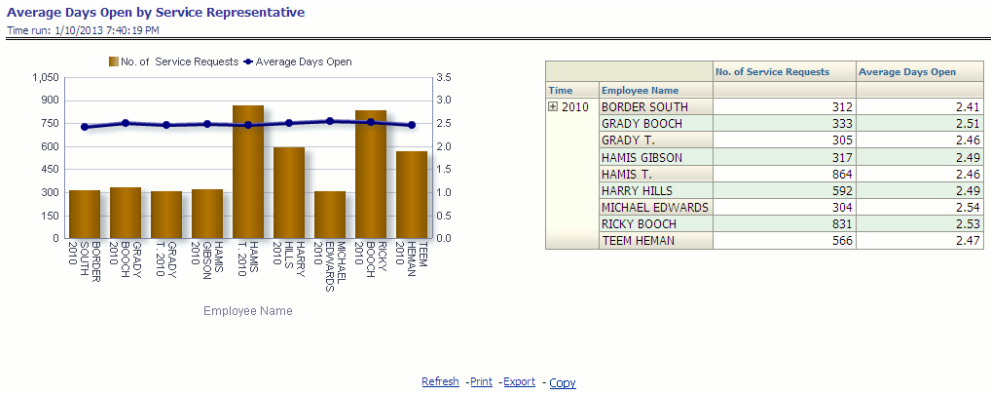
- Top Serviced Customers

  This report displays top customers generating Service Requests.



- Average Days Open by Service Representative

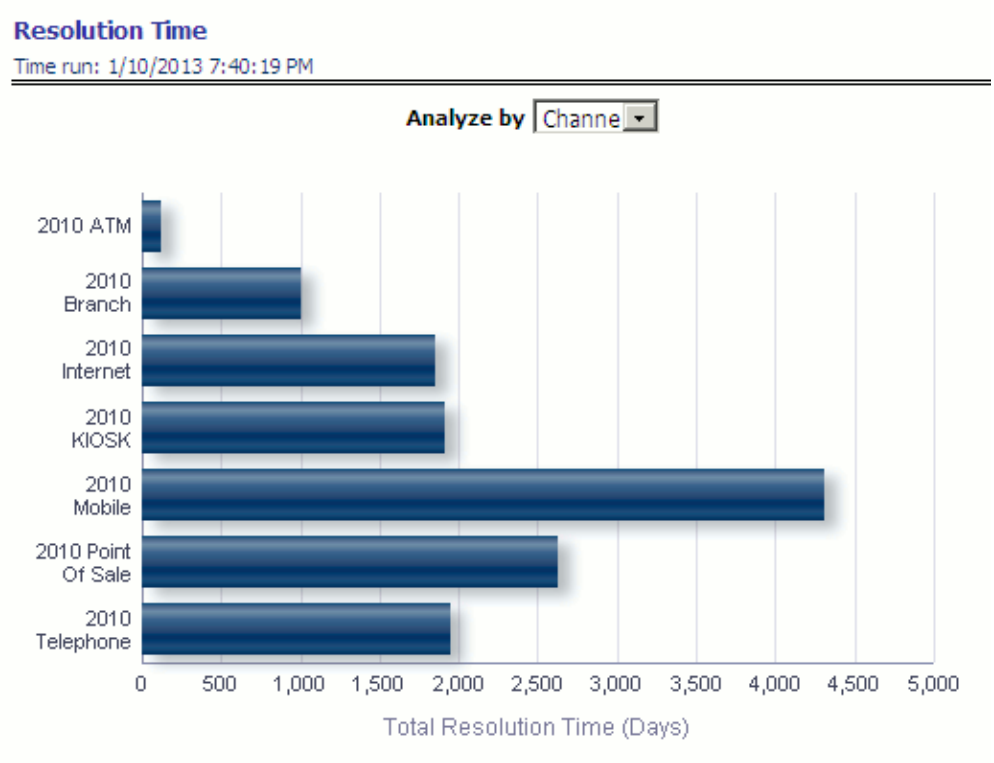
  This is a report that tracks the average days a Service Request is open once assigned to a Service Representative.



Time	Employee Name	No. of Service Requests	Average Days Open
2010	BORDER SOUTH	312	2.41
	GRADY BOOCH	333	2.51
	GRADY T.	305	2.46
	HAMIS GIBSON	317	2.49
	HAMIS T.	864	2.46
	HARRY HILLS	592	2.49
	MICHAEL EDWARDS	304	2.54
	RICKY BOOCH	831	2.53
	TEEM HEMAN	566	2.47

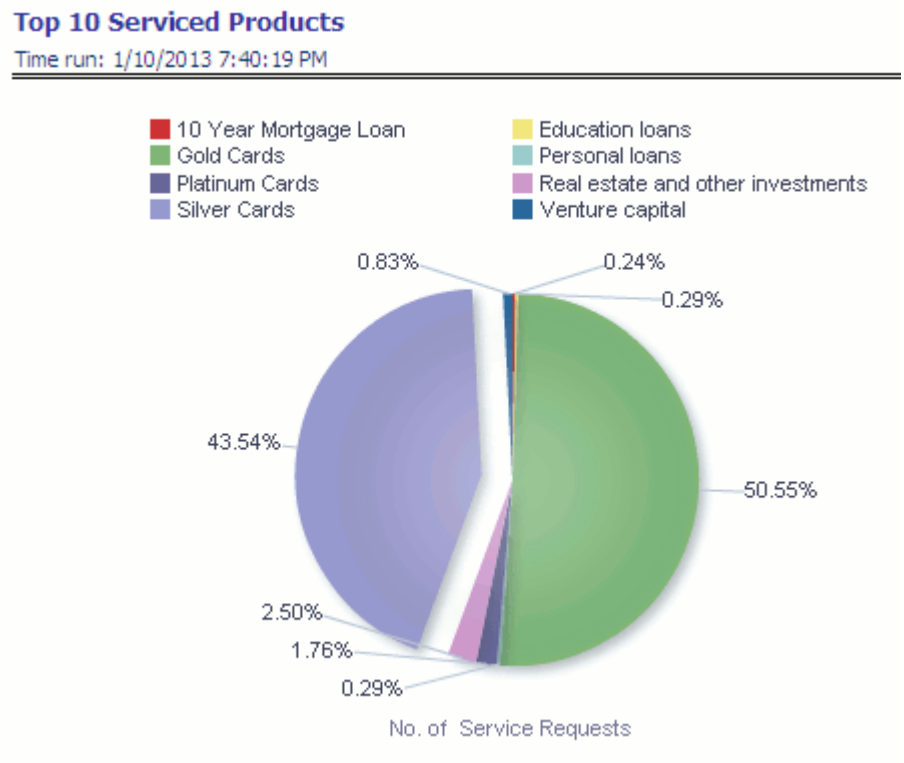
- Resolution Time

  This is a trend report of Resolution time across channels.



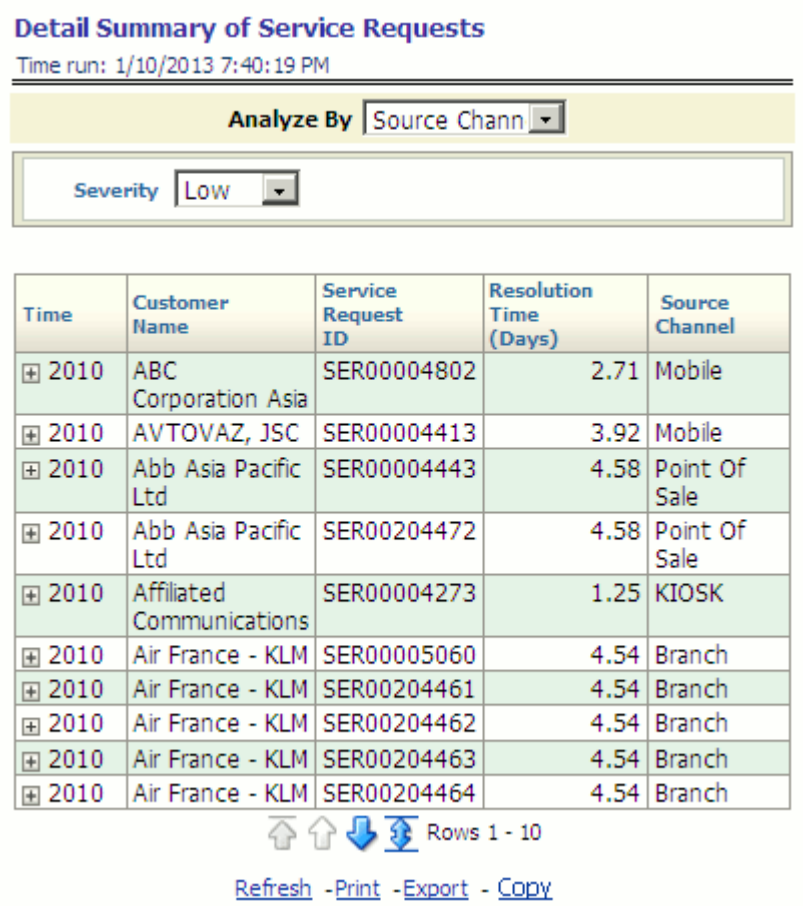
- Top 10 Serviced Products

  This report displays Top 10 products that generate the most Service Requests.



- Detail Summary of Service Requests

  This report displays a detailed report of service requests generated in a specific channel or within a specific product (across channels).



Detail Summary of Service Requests

Time run: 1/10/2013 7:40:19 PM

Analyze By Source Chann

Severity Low

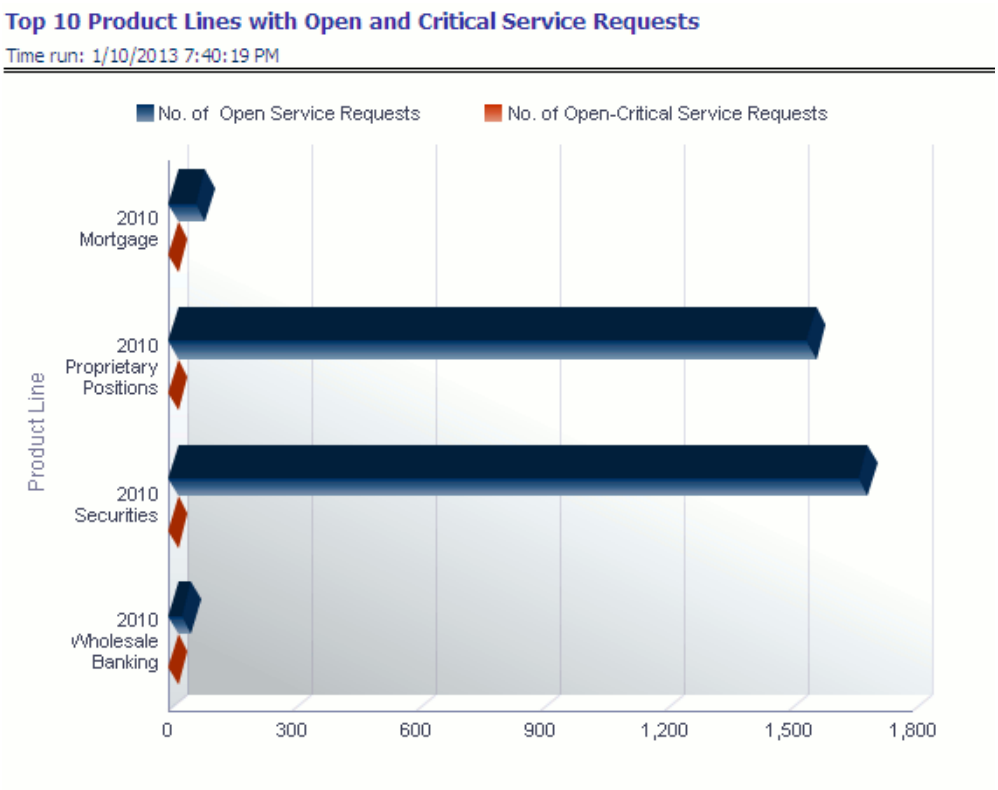
Time	Customer Name	Service Request ID	Resolution Time (Days)	Source Channel
⊞ 2010	ABC Corporation Asia	SER00004802	2.71	Mobile
⊞ 2010	AVTOVAZ, JSC	SER00004413	3.92	Mobile
⊞ 2010	Abb Asia Pacific Ltd	SER00004443	4.58	Point Of Sale
⊞ 2010	Abb Asia Pacific Ltd	SER00204472	4.58	Point Of Sale
⊞ 2010	Affiliated Communications	SER00004273	1.25	KIOSK
⊞ 2010	Air France - KLM	SER00005060	4.54	Branch
⊞ 2010	Air France - KLM	SER00204461	4.54	Branch
⊞ 2010	Air France - KLM	SER00204462	4.54	Branch
⊞ 2010	Air France - KLM	SER00204463	4.54	Branch
⊞ 2010	Air France - KLM	SER00204464	4.54	Branch

Rows 1 - 10

Refresh -Print -Export - Copy

- Top 10 Product Lines with Open and Critical Service Requests

  This report displays Top 10 Product Lines that have the most Critical Requests still in open status.



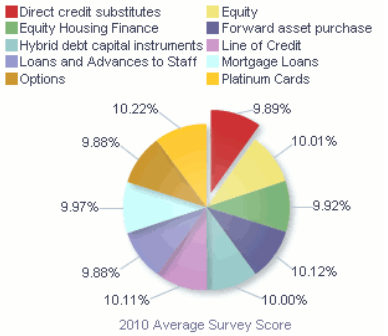
- Top 10 Products by Customer Satisfaction

  This report reports customer satisfaction scores for various products.

Top 10 Products by Customer Satisfaction

Time run: 1/10/2013 7:35:25 PM

Time	Product	No. of Surveys	Average Survey Score
2010	Platinum Cards	4	5.36
	Forward asset purchase	4	5.31
	Line of Credit	4	5.30
	Equity	4	5.25
	Hybrid debt capital instruments	4	5.25
	Mortgage Loans	4	5.23
	Equity Housing Finance	4	5.21
	Direct credit substitutes	4	5.19
	Options	4	5.19
	Loans and Advances to Staff	4	5.18



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- Customer Complaint and Follow up Action Report

  This report shows the details of critical service requests open within a certain product that needs to be tracked to closure.

Customer Complaint and Follow up Action Report

Time run: 1/10/2013 7:35:25 PM

Product Family: Cards Product: Gold Cards

Time	Service Representative	Complaint Description	Follow Up Action Taken	Request Logged Date	Request Closed Date	Total Resolution Time (Hours)	Customer
2010	BORDER SOUTH	DESCRIPTION1172	ACTION1172	23-Dec-2009	25-Dec-2009	68	CU_CA_260
		DESCRIPTION1303	ACTION1303	30-Dec-2010	30-Dec-2010	19	CU_CA_424
		DESCRIPTION189	ACTION189	19-Jan-2010	23-Jan-2010	109	CU_CA_334
		DESCRIPTION2211	ACTION2211	27-Jan-2010	27-Jan-2010	0	CU_CA_458690
					27-Jan-2010	1	CU_CA_94756
					27-Jan-2010	1	CU_CA_56955
					27-Jan-2010	2	CU_CA_417511
					27-Jan-2010	3	CU_CA_60277
					27-Jan-2010	3	CU_CA_339725
					27-Jan-2010	5	CU_CA_100313
					27-Jan-2010	8	CU_CA_335893
					27-Jan-2010	9	CU_CA_132397
					27-Jan-2010	9	CU_CASA_160574
					27-Jan-2010	9	CU_CA_199084
					27-Jan-2010	10	CU_CA_47614

Rows 1 - 15

A

How to Add a New Dimension

Introduction

This section explains the steps to be performed by the user for adding a new dimension to the cube.

As a prerequisite, dimension tables should be added in the data model and the fact table needs to have the referential key with the dimension table. These dimension tables will hold dimension members and can be level-based or parent-child.

Level based dimension tables contain columns for each level of the hierarchy, while parent-child dimension tables contain columns for storing the relationship between the parent and child members. These dimension tables can be loaded from external systems or can be maintained within the Dimension Management component of OFSAAI.

If user intends to maintain the dimension within OFSAAI, refer to Data Model Utilities Guide for adding dimension tables under "Object Management" chapter.

Procedures to Add a New Dimension

Step 1 – Add Business Hierarchy

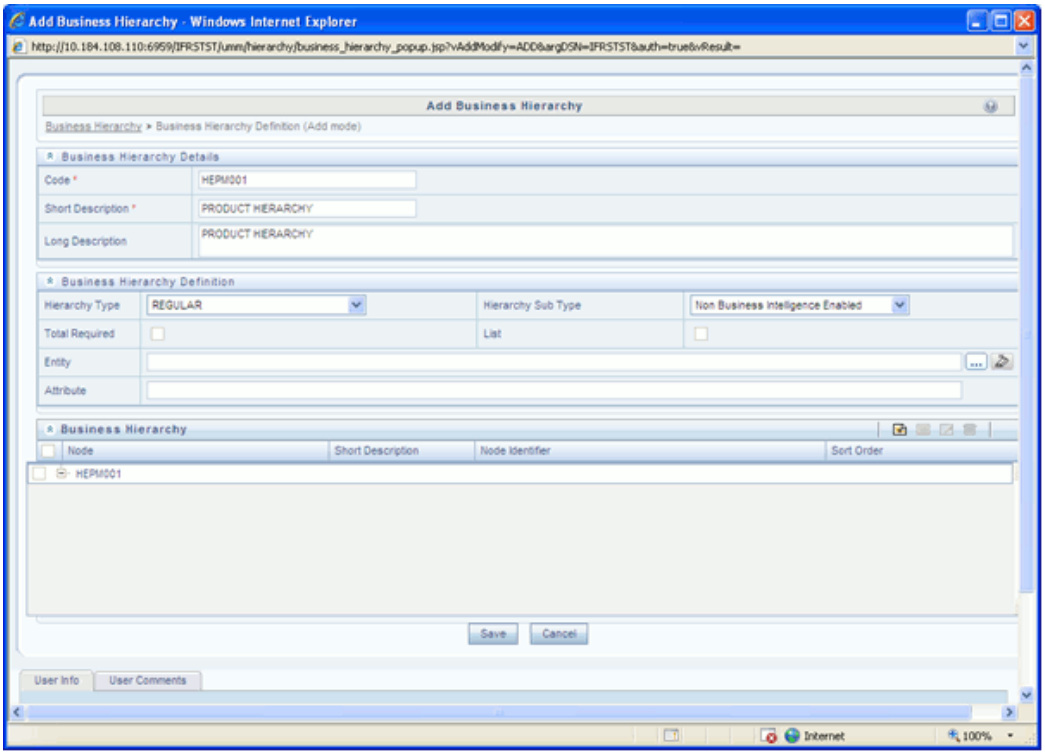
To define a new **Business Hierarchy**, go to **Unified Metadata Manager**, select **Business Metadata Management** and choose the type of hierarchy.

Hierarchy Types are:

- **Regular** – For representing non-time and non-measure dimensions in a hierarchical format. For example, this type are Product, Organization Unit, and so on.

- **Measure** – For representing the measures in the hierarchical format. This corresponds to a ACCOUNT hierarchy within the ESSBASE. An example of this type is Management Reporting Line.

- **Time** – For representing the calendar or date dimension in a hierarchical format. This corresponds to a TIME hierarchy within Essbase. An example of this type is Calendar hierarchy.



Choose Hierarchy subtype. Hierarchy SubTypes are:

- **Non Business Intelligence Enabled** – For representing the hierarchy with underlying data store containing just leaves and nodes are built within the metadata of the hierarchy. This subtype is useful for modelling bucket/range, ragged, and non-additive hierarchies.

- **Business Intelligence Enabled** – For representing the hierarchy with underlying data store as level-based dimension table. This subtype is useful for modelling balanced hierarchies.

- **Parent Child** – For representing the hierarchy with underlying data store as a parent-child dimension table. This subtype is useful for modelling ragged hierarchies.

Select the "Total Required" property, if a TOTAL is required to be included as the root node of the hierarch and select the "List" property, if hierarchy is a flat list of members without any levels.

Choose the entity and attribute on which the hierarchy is based. The components for hierarchy definition differ for each subtype of the hierarchy.

If subtype is "Non Business Intelligence Enabled", then the user can add nodes and order in which the node should appear in the hierarchy (sort-order). Node identifiers are SQL expressions that are specified for leaf members and data is classified based on the node identifiers.

If sub-type is "Business Intelligence Enabled", then the user can specify the levels and SQL expression for each level within the hierarchy.

If sub-type is "Parent Child", then the user can specify the column that contains the parent member and that contains the child member.

For more details, refer to *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide.*

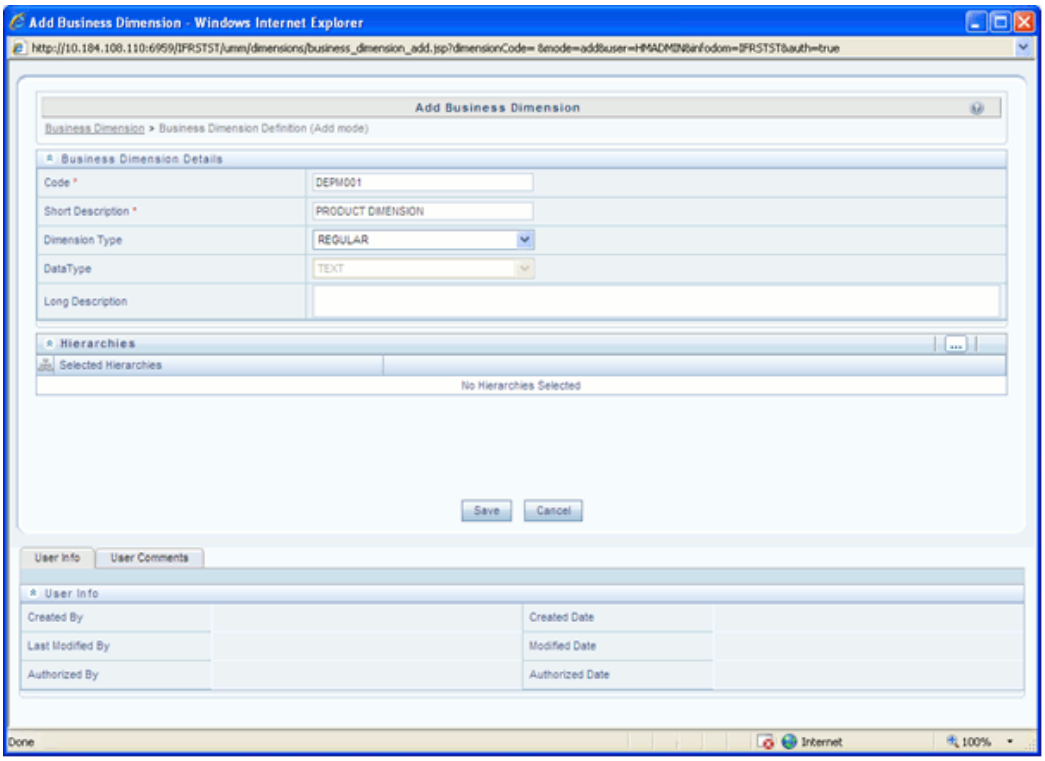
Step 2 – Add Business Dimension

To define a new **Business Dimension,** go to **Unified Metadata Manager**, select **Business Metadata Management**.

Choose the **Dimension Type**. Dimension Type is same as Hierarchy Type and helps to filter the hierarchies that will be part of the dimension. A dimension will contain one or many hierarchies. Choose the hierarchies that are part of the dimension.

The User Info grid at the bottom of the screen displays the metadata information about the Business Dimension created along with the option to add comments.

Click **Save** in **Add Business Dimension** screen to save the details.

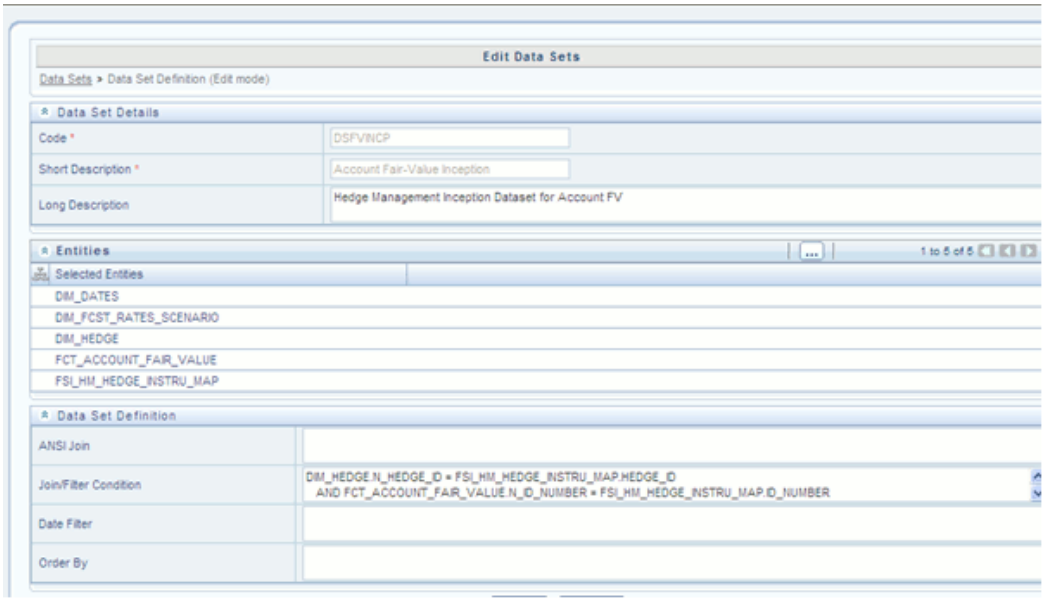


For more details, refer to *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide.*

Step 3 – Modify Data Set

To modify **Data Sets**, go to **Unified Metadata Manager --> Business Metadata Management.**

Identify data sets that are based on the modified fact table. Open the data set definition. Include the new dimension table in the data set. Modify the data set JOIN to include the join clause between the fact table and new dimension table. Save the data set.



For more details, refer to *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide.*

Step 4 – Modify Cube Definition

Modify "Cubes" in **Unified Metadata Manager -> Business Metadata Management**. Identify the cube that needs to be modified. Open the cube definition. Add the new dimension. Map the measures to the newly added dimension and **Save** the cube definition.

For more details, refer to *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide.*

Step 5 – Build Cube

Assuming that the dimension table and fact table is loaded with relevant data, cube can be built. Define batch to execute the CREATE CUBE component that will build the outline and load data in ESSBASE.

For more information on executing batch, refer to *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide*.

B

How to Add a New Measure

Introduction

This section details the steps to be performed by the user for adding a new measure to the cube. As a prerequisite, the fact table needs to have the column that holds values for the new measure.

Procedures to Add a New Dimension

Step 1 – Add Business Measure

1. From **Unified Metadata Manager**, select **Business Metadata Management**, then select **Business Measures**.

2. From Business Measures, click **Add** to create a Business measure definition. In the Business Measure Definition (Add mode) window, Select **Aggregation Function**. Aggregation Function can be:

   - SUM – for summing up the values in the column of the fact table.
   - COUNT – for determining the number of records in the fact table.
   - MAXIMUM – for identifying the maximum value of a column in the fact table.
   - MINIMUM – for identifying the minimum value of a column in the fact table.
   - COUNT DISTINCT – for determining the distinct count of records in the fact table.

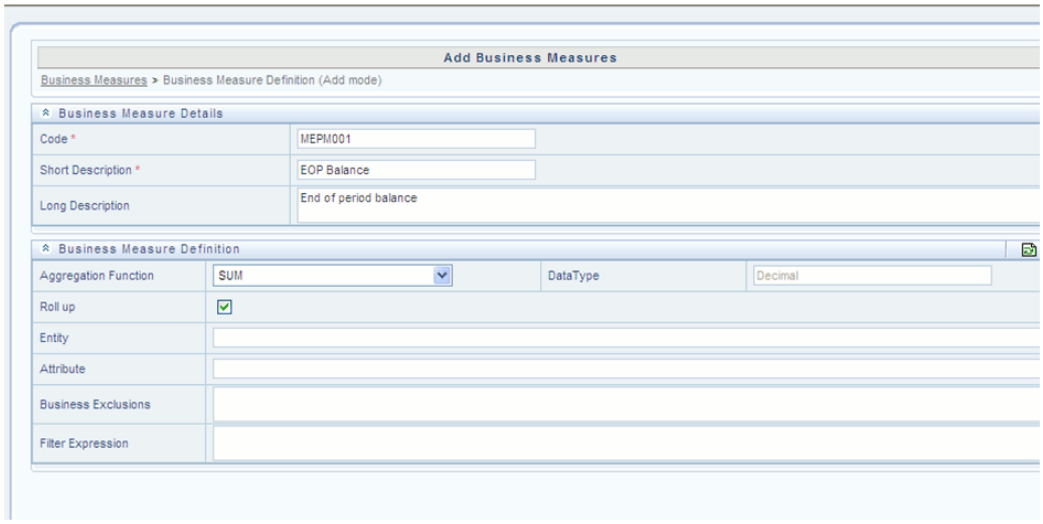
3. Specify if this measure needs to be rolled up against hierarchies.

4. Select the fact table as part of the Entity.

5. Select the column of the fact table as part of the Attribute. This column will hold the value of the measure.

6. Specify Business Exclusions and Filters, if required.

7. Save the measure.



For more information on Business Measures, see Business Measures under Unified Metadata Manager chapter in *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide*.

Step 2 - Modify Cube Definition

1. From **Unified Metadata Manager**, select **Business Metadata Management**, then select **Cube**.

2. Identify the cube that needs to be modified.

3. Edit the cube definition.

4. Add the new measure.

5. Map the measures to the to the required dimensions.

6. Save the cube definition.

Step 3 - Build Cube

Assuming that the dimension table and fact table is loaded with relevant data, cube can be built.

Define batch to execute the CREATE CUBE component that will build the outline and load data in ESSBASE.

For more information on executing the batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

C

How to Develop a New Cube

Introduction

This section details the steps to be performed by the user for developing a new cube. Make sure that the existing cubes do not provide the required analytics / reporting coverage before deciding to define a new cube.

In case, user would like to see measures against a new dimension that is not part of the existing seeded metadata, then suggest including the new dimension as part of the existing cubes instead of creating a new cube. As a prerequisite, user should have defined datasets, measures, hierarchies and dimensions before defining a cube.

Procedures to Develop a New Cube

Step 1 – Add Cube

From **Unified Metadata Manager**, select **Business Metadata Management**, then select **Cube**. Specify the MDB details that will be created in ESSBASE.

Step 2 – Include Dimensions

Include dimensions that are part of the cube definition. Users mandatorily need to include TIME and MEASURE dimensions.

Step 3 – Specify Variations

Specify variations between each of the measures to the respective dimensions. All the measures that are part of the cube need not vary against all of the dimensions. Depending on business needs, variations can be specified to control the rollup of measures against a set of dimensions.

Step 4 – Specify Dataset

Specify dataset corresponding to the selected dimensions and measures. Data set will supply required data to the cube.

Step 5 – Specify Node Level Formula

If node level formula's are required to be specified for the nodes within the hierarchy, then they can be specified in this UI.

Step 6 – Save and Build

Save the cube. Define and execute batch in ICC to build the cubes.

For more information on Cubes, see Cubes under Unified Metadata Manager chapter in *Oracle Financial Services Analytical Applications Infrastructure 7.3 User Guide*.

D

How to Define a Batch

Introduction

Batch refers to a set of executable processes based on a specified rule. Batch Maintenance framework within OFSAAI facilitates you to create and maintain the Batch Definitions. You can process the Batch scheduled for execution from Batch Maintenance and also from other modules.

You need to have Data Centre Manager function role mapped to access the Operations framework within OFSAAI. You can access Batch Maintenance by expanding Operations section within the tree structure of LHS menu. The *Batch Maintenance* window displays a list of Batches scheduled for maintenance with the other details such as Batch ID, Batch Description, and the editable state of the Batch.

Batch Creation

You can create a batch from the *Batch Maintenance* screen as mentioned below:

1. From the OFSAAI **Home** menu, navigate to **Operations > Batch Maintenance**.
2. In the *Batch Maintenance* window, Select '+' button from the *Batch Name* tool bar.

   The *New Batch Definition* window is displayed.
3. Enter the Batch details as tabulated.

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 should be unique across the Information Domain. • The Batch Name must be alpha-numeric and should not start with a number. • The Batch Name should not exceed 41 characters in length. • The Batch Name should not contain special characters "." and "-".
Batch Description	Enter a description for the Batch based on the Batch Name.
Duplicate Batch	(Optional) Select the checkbox 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 *Batch Maintenance* window with the specified **Batch ID**.

Note: For a more comprehensive coverage of configuration and execution of a batch, refer to the *Operations* Chapter in *Oracle Financial Services Analytical Applications Infrastructure User Guide.*