Oracle® Financial Services Performance Analytics

Business Administrator User Guide

Release 8.1.2.0.0
F80850-02
April 2023

ORACLE

Oracle Financial Services Performance Analytics Business Administrator User Guide, Release 8.1.2.0.0

F80850-02

Contents

1
Preface

This section provides information about the Oracle Financial Services Performance Analytics (OFS PA) Application User Guide. OFS PA Applications are packaged as part of the OFS PFT Applications Pack.

Topics:

1.1 Audience

This user guide is intended for the users of the Oracle Financial Services Performance Analytics (OFS IPA) Application.

1.2 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For more information, visit My Oracle Support or visit Oracle Accessibility Learning and Support if you are hearing impaired.

1.3 Related Information Sources

This section identifies additional documents related to the OFS IPA Application.

You can access the below documents online from the Oracle Help Center (OHC) Documentation Library for OFS PA Applications Pack:

- OFS Performance Analytics Application Pack Release Notes
- OFS Performance Analytics Applications Pack Installation and Configuration Guide
- OFS Performance Analytics Operational User Guide
- OFS Performance Analytics Business User Guide
- OFS Performance Analytics OBIEE Reports User Guide Release

Performance Analytics Security Guides:

- OFS Institutional Performance Analytics Security Guide Release 8.1.x
- OFS Retail Performance Analytics Security Guide Release 8.1.x

Performance Analytics Cloning Reference Guides:

- OFS Institutional Performance Analytics Cloning Reference Guide Release 8.1.x
- OFS Retail Performance Analytics Cloning Reference Guide Release 8.1.x

Data Protection Guide:

- OFS Performane Analytics Data Protection Guide Release 8.1.x

1.4 Additional Documents to Read

Oracle Financial Services Profitability Analytics Applications Pack is built on the Oracle Financial Services Advanced Analytical Applications Infrastructure (OFS AAI).

See the following OFS AAI Documents as no separate documents are required at the pack or application level for Oracle Financial Services Profitability Analytics Applications Pack:

- OFS Analytical Applications Infrastructure (OFS AAAI) Application Pack Installation and Configuration Guide Release 8.1.2.0.0
- OFS Analytical Applications Infrastructure Administration Guide Release 8.1.x
- OFS Analytical Applications Infrastructure User Guide Release 8.1.2.0.0
- OFS Analytical Applications Infrastructure Cloning Reference Guide Release 8.1.x
- OFS Analytical Applications Infrastructure Security Guide Release 8.1.x

You can access the common document from the OHC Documentation Library:

- OFSAA Licensing Information User Manual
- OFS Analytical Applications 8.1.2.0.0 Technology Matrix

1.5 Conventions

The following text conventions are used in this document:

Table 1-1 Conventions Used in this Guide

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, file names, text that appears on the screen, or text that you enter.
Hyperlink	Hyperlink type indicates the links to external websites, internal document links to sections.

1.6 Abbreviations

The following table lists the abbreviations used in this document:

Abbreviation	Meaning
BDP	Big Data Processing
DBA	Database Administrator
DDL	Data Definition Language
DEFQ	Data Entry Forms and Queries
DML	Data Manipulation Language
EAR	Enterprise Archive
EJB	Enterprise JavaBean
ERM	Enterprise Resource Management
FTP	File Transfer Protocol
HDFS	Hadoop Distributed File System
HTTPS	Hypertext Transfer Protocol Secure
J2C	J2EE Connector
J2EE	Java 2 Enterprise Edition
JCE	Java Cryptography Extension
JDBC	Java Database Connectivity
JDK	Java Development Kit
JNDI	Java Naming and Directory Interface
JRE	Java Runtime Environment
JVM	Java Virtual Machine
LDAP	Lightweight Directory Access Protocol
LHS	Left Hand Side
MFA	Multi-Factor Authentication
MOS	My Oracle Support
OFSAA	Oracle Financial Services Analytical Applications
OFSAAI	Oracle Financial Services Analytical Application Infrastructure
OFSAAAI	Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack
OHC	Oracle Help Center
OLAP	On-Line Analytical Processing
OLH	Oracle Loader for Hadoop
ORAAH	Oracle R Advanced Analytics for Hadoop
OS	Operating System
RAM	Random Access Memory
RDBMS	Relational Database Management System
RHEL	Red Hat Enterprise Linux
SFTP	Secure File Transfer Protocol
SID	System Identifier
SSL	Secure Sockets Layer
TNS	Transparent Network Substrate
URL	Uniform Resource Locator
VM	Virtual Machine
WAR	Web Archive
XML	Extensible Markup Language

2

OFS Institutional Performance Analytics (OFS IPA)

Oracle Financial Services Institutional Performance Analytics (OFS IPA) 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.

It enables you to actively plan, manage, and track marketing investments with pre-built reports, dashboards, and underlying data structures.

The OFS IPA solution is a part of the Profitability Pack and is packaged along with AAI and other applications. This OFS IPA is supported for Oracle Database version 18c and 19c.

OFS IPA solution is built using the OBIEE for Dashboard and Reports activities.

This section discusses the essential Oracle Financial Services Analytical Applications (OFSAA) Infrastructure required for OFS IPA activities, the process flow for the data transformation, and cube building processes. Also, it includes subject areas that could be used for ad-hoc reporting using the OBIEE Answers tool.

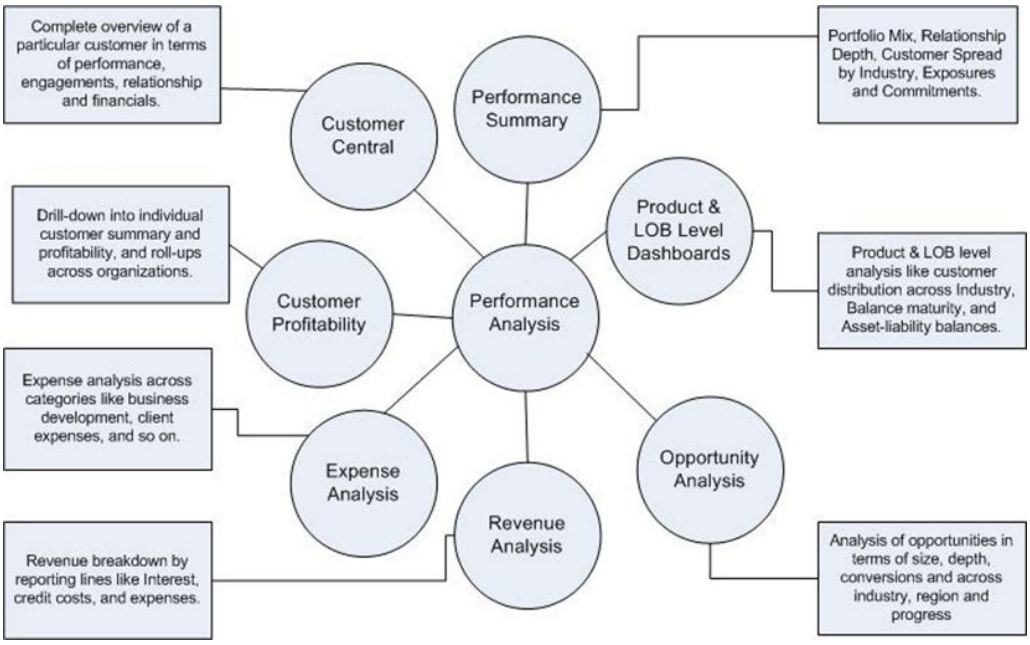
2.1 OFS IPA Process Flow

Oracle Financial Services Institutional Performance Analytics (OFS IPA) utilizes OBIEE technology to generate the following:

- Behavioral and Engagement trends of its target segments - exposures, commitments, line utilization, assets and liabilities, deposits, withdrawals, fees, income, recent transactions, and so on.
- Performance of the business and underlying customers.
- Product holdings and across the organization (that is Corporate client and any of its subdivisions or subsidiaries).
- The efficiency of the sales force in terms of ongoing customer revenue generation, cross-sell and up-sell, product usage, and pipeline.
- The efficiency of investments such as marketing, partner development, and so on.

The objectives of the OFS IPA application is represented in the following flow diagram:

Figure 2-1 OFS IPA Application Objectives



OFS IPA is designed for OBIEE reading data from a relational database. The relational database comprise of various dimensions and facts in the BI data model.

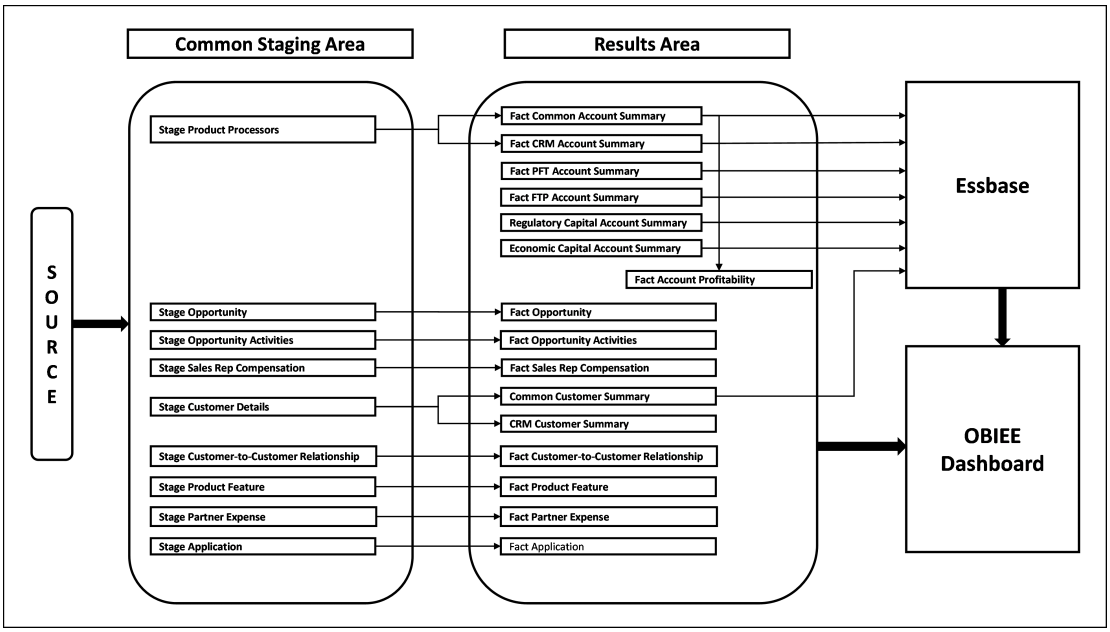
OFS IPA can be independently licensed and installed to work on top of the OFSAAI infrastructure.

2.2 Data Flow

OFS IPA Data Model contains the Staging Tables from which data is loaded into Dimensions and Fact Tables. Staging Tables include the Master Staging Tables, Detail Staging Tables, Staging Product Processor Tables, and so on. The user must populate data into these Staging Tables.

The following image shows the process flow for Staging Tables:

Figure 2-2 Staging Tables



2.3 Dimension Data Flow

Dimension Data in the OFS IPA 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, and so on.

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

Following are the list of Dimensions used in OFS PACS:

Table 2-1 OFS IPA Dimension

Dimension Entity Name	Staging Entity Name (or names)	Loading or Maintenance Method
Account Status Dimension	Stage Account Status Master	SCD
Application Reject Reasons Dimension	Stage Application Reject Reason Master	SCD
Application Type Dimension	Stage Application Type Master	SCD
Attrition Dimension	Stage Attrition Reason Master	SCD
Account Management Dimension	Stage Account Mgmt Master	SCD
Country Dimension	Stage Country Master	SCD
Credit Center Dimension	Stage Credit Center Master	SCD
Credit Officer Dimension	Stage Credit Officer Master	SCD

Table 2-1 (Cont.) OFS IPA Dimension

Dimension Entity Name	Staging Entity Name (or names)	Loading or Maintenance Method
Customer Dimension	Stage Customer Master	DT
Customer Type Dimension	Stage Customer Type Master	SCD
Decision Status Dimension	Stage Decision Status Master	SCD
Deviation Reasons Dimension	Stage Deviation Reason Master	SCD
Education Dimension	Stage Customer Education Master	SCD
Geography Dimension	Stage Geography Master	SCD
Industry Dimension	Stage Industry Master	SCD
Management Dimension	Stage Account Mgmt Master	SCD
Migration Reasons Dimension	Stage Migration Reason Master	SCD
Offer Dimension	Stage Offer Master	SCD
Opportunity Dimension	Stage Opportunity	SCD
Opportunity Activity Type Dimension	Stage Activity Type Master	SCD
Organization Structure Dimension	Stage Organization Structure Dimension	SCD
Partner Dimension	Stage Partner Master	SCD
Product Dimension	Stage Product Master	SCD
Product Feature Dimension	Stage Product Feature Master	SCD
Product Type Dimension	Stage Product Type Master	SCD
Prospect Dimension	Stage Prospect Master	SCD
Reason Dimension	Stage Opportunity Win-Loss Reason Master	SCD
Retention Offer Type Dimension	Stage Retention Offer Master	SCD
Sales Representative Dimension	Stage Sales Rep Master	SCD
Vendor Dimension	Stage Vendor Master	SCD
Vintage Dimension	Stage Vintage Master	SCD
Line of Business Dimension	Stage Line of Business Master	SCD
Common Chart Of Accounts Dimension	Common COA Dimension Members, Common COA Hierarchies, Common COA Member Attributes, Common COA Member Translations	SCD
General Ledger Account Dimension	General Ledger Member Attributes, General Ledger Dimension Members, General Ledger Hierarchies, General Ledger Member Translations	SCD

Table 2-1 (Cont.) OFS IPA Dimension

Dimension Entity Name	Staging Entity Name (or names)	Loading or Maintenance Method
DIM_ORG_UNIT	Organization Unit Member Attributes, Organization Unit Dimension Members, Organization Unit Hierarchies, Organization Unit Member Translations	SCD
Product Dimension	Product Member Attributes, Product Dimension Members, Product Hierarchies, Product Member Translations	SCD
Reporting Line Dimension	Reporting Line Dimension Members, Reporting Line Member Translation, Reporting Line Member Attributes, Reporting Line Hierarchies	AMHM/DT
Region Dimension		Direct Load
Acquisition Channel Dimension	Stage Sales Channel Master	SCD
Instrument Category Dimension		Seeded
Currency Dimension		Seeded
Consolidation Dimension		Seeded
Calendar Dimension		DT
Account Dimension	Stage LC Contracts Stage Commitment Contracts	SCD SCD
Party Dimension	Stage Party	SCD
Location Dimension	Stage Location Master	SCD
Band Dimension	Band Dimension Members, Band Member Translation, Band Member Attributes	AMHM/SCD NOTE: When updating DIM_BANDS, the lower bound of one band cannot start with the upper bound of the previous band. For example, for a Customer Balance band, if the upper bound of the first band is 10,000 USD, the lower bound of the next band must start with 10,000.01 USD, if the data load convention followed is for two decimal points. For integer bands, for example, Number of Transactions; if the upper bound of a band ends with 5, the lower bound of the next band must begin with 6.

Table 2-1 (Cont.) OFS IPA Dimension

Dimension Entity Name	Staging Entity Name (or names)	Loading or Maintenance Method
Account Dimension	Stage OD accounts	SCD
	Stage TD contracts	SCD
	Stage Trusts	SCD
	Stage Loan Contracts	SCD
	Stage Mutual Funds	SCD
	Stage Bills Contracts	SCD
	Stage CASA Accounts	SCD
	Stage Guarantees	SCD
	Stage Leases Contracts	SCD
	Stage MM Contracts	SCD
	Stage Annuity Contracts	SCD
	Stage Borrowings,	SCD
	Stage Card Accounts	
	Stage Investments	SCD

Some of the Stage Data can also come from Master Data Management Interfaces. In such a case, data from the interface is loaded into staging interface tables and SCD is run on the interface tables. Mapping of dimensional attributes to staging can be obtained by querying SYS_STG_JOIN_MASTER and SYS_TBL_MASTER table in the Atomic Schema.

2.4 Key Dimensions for Reporting

The following Key Dimensions are required for OFS IPA reporting as these dimensions are directly used by the reports:

- Opportunity Activity Type Dimension
- Attrition Dimension
- Bands Dimension
- Acquisition Channel Dimension
- Consolidation Dimension
- Currency Dimension
- Customer Dimension
- Customer Type Dimension
- Date Dimension
- Geography Dimension
- Account Dimension
- Industry Dimension
- Line of Business Dimension
- Account Management Dimension

- Migration Reasons Dimension
- Dimension
- Organization Structure Dimension
- Org Unit BI Hierarchy
- Partner Dimension
- Product Dimension
- Product Type Dimension
- Product Family Holding Dimension
- Prospect Dimension
- Reporting Line Dimension
- Run Dimension
- Sales Representative Dimension
- Sales Stage Dimension
- Vintage Dimension
- Location Dimension

2.5 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. For example, 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 Account Profitability, and so on.

Table 2-2 Fact Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Account Summary	Stage	Stage Annuity Contracts, 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, Stage Trusts, Stage Commitment Contracts, Stage Mutual Funds	T2T

Table 2-2 (Cont.) Fact Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact PFT Account Summary	Instrument	Annuity Contracts, Borrowings, Checking and Savings Account, Credit Cards, Credit Lines, Guarantees, Investments, Leases, Loan Contracts, Mortgages, Term Deposits, Trusts, Stage Mutual Funds	T2T
Fact FTP Account Summary	Instrument	Annuity Contracts, Borrowings, Checking and Savings Account, Credit Cards, Credit Lines, Guarantees, Investments, Leases, Loan Contracts, Money Market Contracts, Mortgages, Term Deposits, Trusts Stage Mutual Funds	T2T
Fact CRM Account Summary	Stage	Stage Annuity Contracts, 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, Stage Trusts, Stage Commitment Contracts	T2T
Fact Common Customer Summary	Stage	Stage Customer Details, Stage Party Rating Details, Stage Party Financials	T2T
Fact CRM Customer Summary	Stage and Fact	Stage Customer Master, Stage Customer Details, Fact Common Account Summary	T2T
Fact Account Feature Map Stage	Stage	Account Feature Map	T2T
Fact Customer to Customer Relationship	Stage	Stage Customer to Customer Relationships	T2T
Fact Opportunity	Stage	STG_OPPORTUNITY	T2T

Table 2-2 (Cont.) Fact Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
FCT_OPPORTUNITY_ACTIVITY	Stage	STG_OPPORTUNITY_ACTIVITY	T2T
Fact Account Profitability	Fact	Fact Common Account Summary, Fact FTP Account Summary, Fact PFT Account Summary, Fact Regulatory Capital Account Summary, Fact Economic Capital Account Summary	DT
Fact Account Customer Relationship	Stage	Stage Customer Relationships	T2T
Fact Account Manager Relationship	Stage	Stage Account Manager Relationship	T2T
Fact Forecast And Plan Data	Stage	Stage Forecast and Plan Data	
Exchange Rate History	Stage	Stage Exchange Rates	T2T
Exchange rates	View	View on Stage Exchange Rates	T2T
Fact Party Account Role Map	Stage	Stage Party Account Role Map	T2T
Fact Party Financials	Stage	Stage Party Financials	T2T
Fact Account Segment MOB Summary	Fact	Fact Account Profitability, Fact Common Account Summary, Fact Account Segment Score	DT
Fact Account Segment Score	Fact	Fact Common Account Summary	DT

The OFS PACS uses some materialized views registered as Derived Entity that must be refreshed as and when the dependent table has fresh data. The MVs can be refreshed by running the batches created for the purpose.

The list of Derived Entity and the dependent objects can be found in the following table.

Table 2-3 Derived Entities and Dependent Objects

Materialized View	Referenced Name	Referenced Object Type
ACNTSMRM	FCT_COMMON_ACCOUNT_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
CUSTDETM	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_GENDER	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table

Table 2-3 (Cont.) Derived Entities and Dependent Objects

Materialized View	Referenced Name	Referenced Object Type
FCSTCUSA	VW_ACCT_VAL_FCST_CUSTAGG_IPA	Table
FCSTLTVM	VW_FORECAST_LTV_IPA	Table
FCSTREPA	VW_ACCT_VAL_FCST_REPAGG_IPA	Table
FSIUSRD	FSI_USER_DATA_ACCESS	Table
MGMTPFTM	ACNTSMRM	Table
	FCT_ACCOUNT_MGR_REL	Table
	FCT_ACCOUNT_PROFITABILITY	Table
MVCACPRO	A_DIM_REP_CURRENCY	Table
	DIM_ACCOUNT	Table
	DIM_CONSOLIDATION	
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
	MVUSRACC	Table
MVCCUSAG	A_DIM_REP_CURRENCY	Table
MGMTPFTM	DIM_ACCOUNT	Table
MVUSRACC	DIM_ACCOUNT	Table
	FCT_COMMON_ACCOUNT_SUMMARY	Table
	FSIUSRD	Table
USRMGRMV	FSI_M_USER_MANAGER_MAP	Table
WTHREPMV	WITH_REP_LINE_DIRECT_INDIRECT	Table
MVCCUSAG	DIM_CONSOLIDATION	Table
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table

Table 2-3 (Cont.) Derived Entities and Dependent Objects

Materialized View	Referenced Name	Referenced Object Type
	FCT_ACCOUNT_PROFITABILITY	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
	MVUSRACC	Table
MVCPROAG	A_DIM_REP_CURRENCY	Table
	DIM_ACCOUNT	Table
	DIM_CONSOLIDATION	Table
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table
	DIM_VINTAGE	Table
	FCT_ACCOUNT_PROFITABILITY	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
	MVUSRACC	Table

2.6 BI Data Model

The BI Data Model is a Star Schema for the fact table FCT_<APPLICATION>_ACCOUNT_SUMMARY.

Following are the subject areas in the Erwin Data Model:

Figure 2-3 Fact Account Feature Map

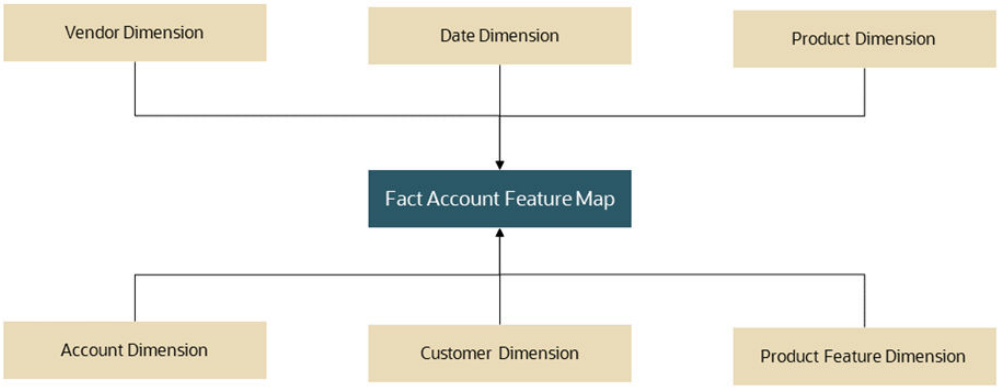


Figure 2-4 Fact Account Manager Relationship

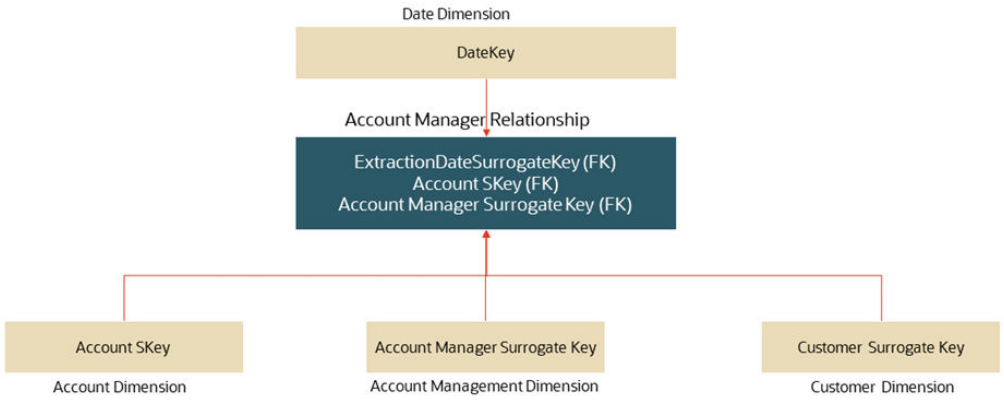


Figure 2-5 Fact Account Profitability

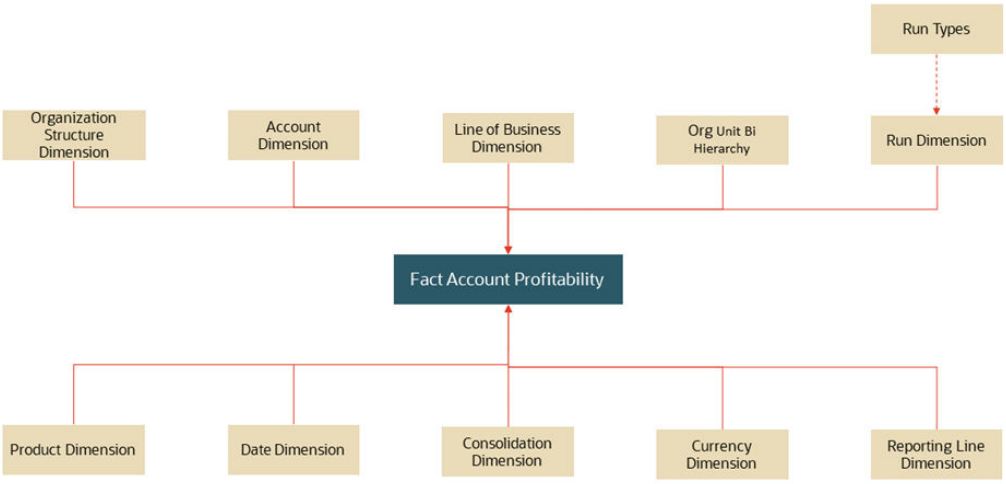


Figure 2-6 Fact Account Segment MOB Summary

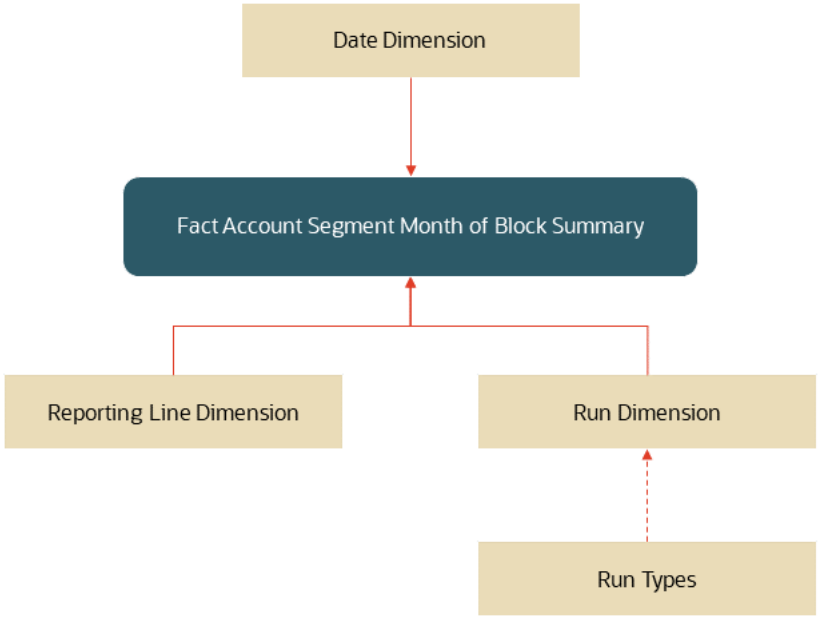


Figure 2-7 Fact Account Segment Score

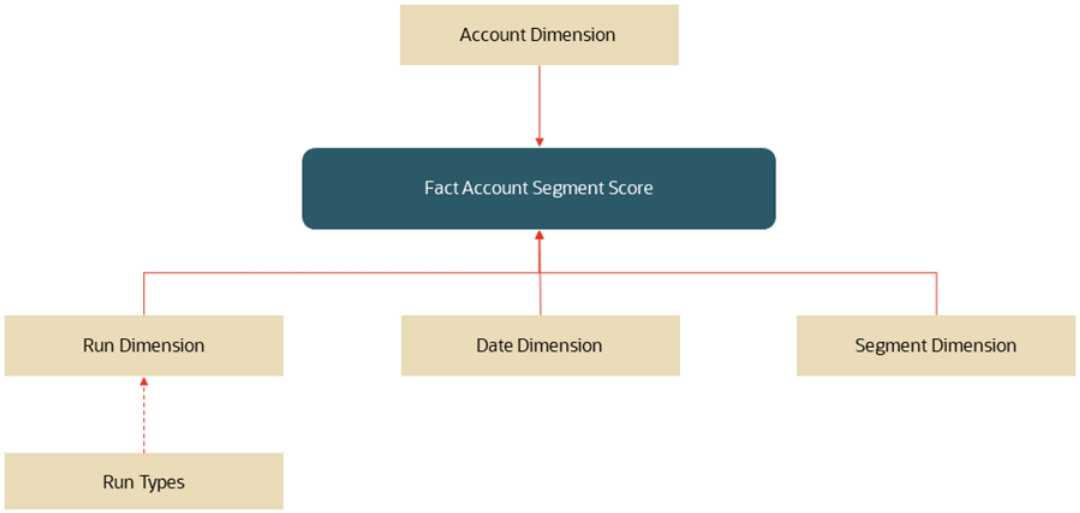


Figure 2-8 Fact Applications Summary

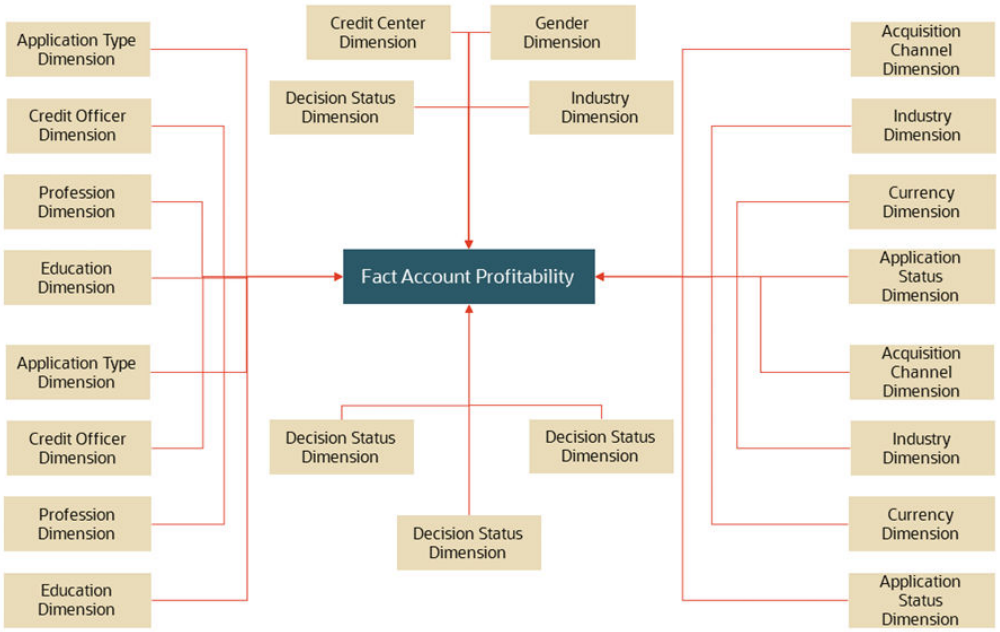


Figure 2-9 Fact Common Account Summary

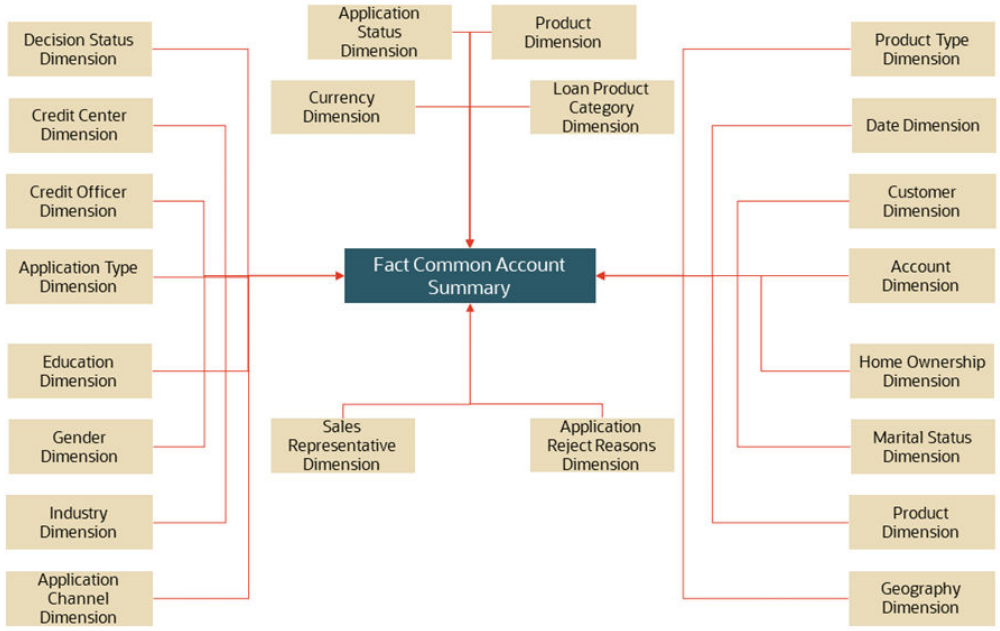


Figure 2-10 Fact Common Customer Summary

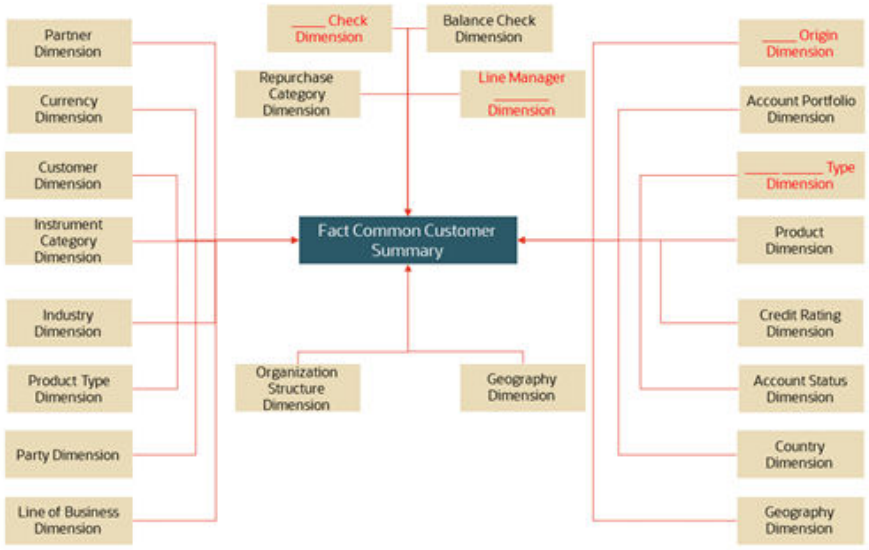


Figure 2-11 Fact CRM Account Summary

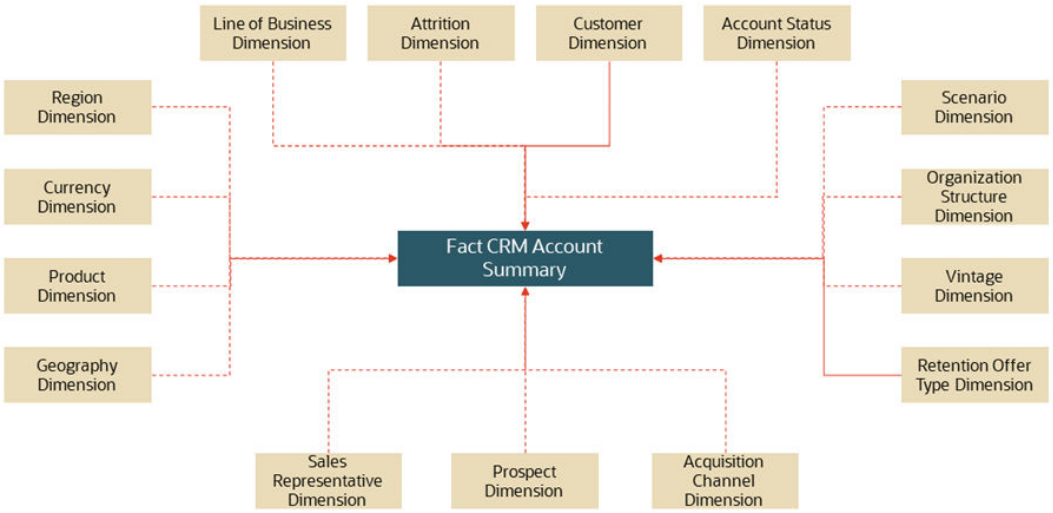


Figure 2-12 Fact Opportunity

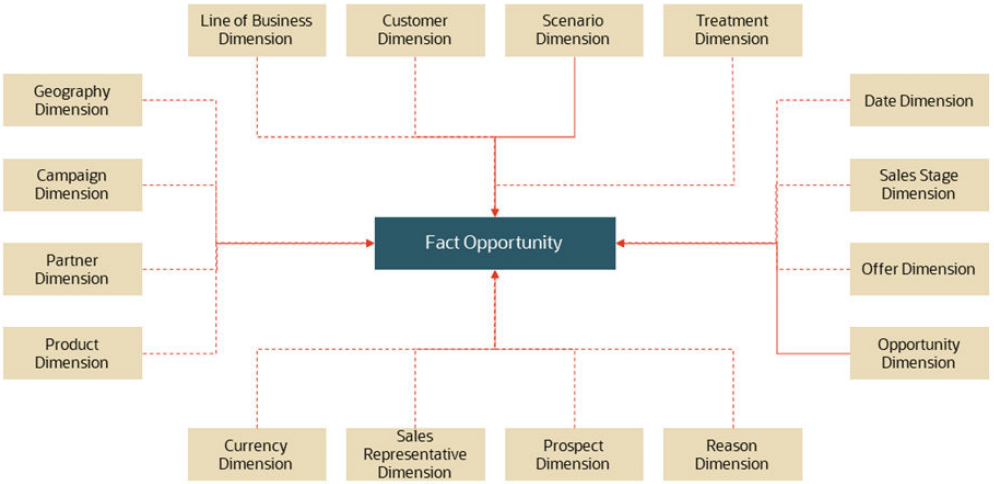


Figure 2-13 Fact Opportunity Activity

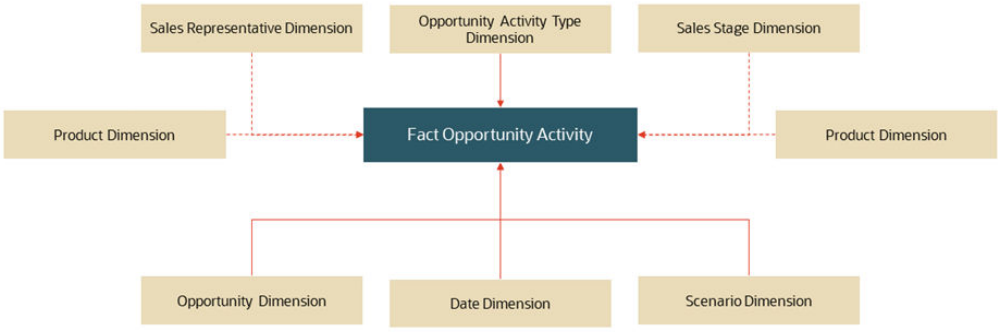


Figure 2-14 Fact Regulatory Capital Account Summary

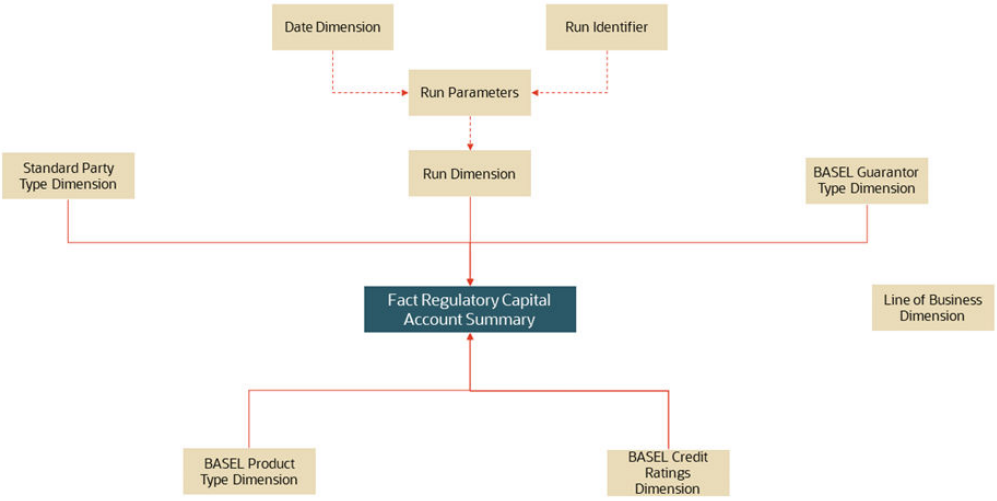
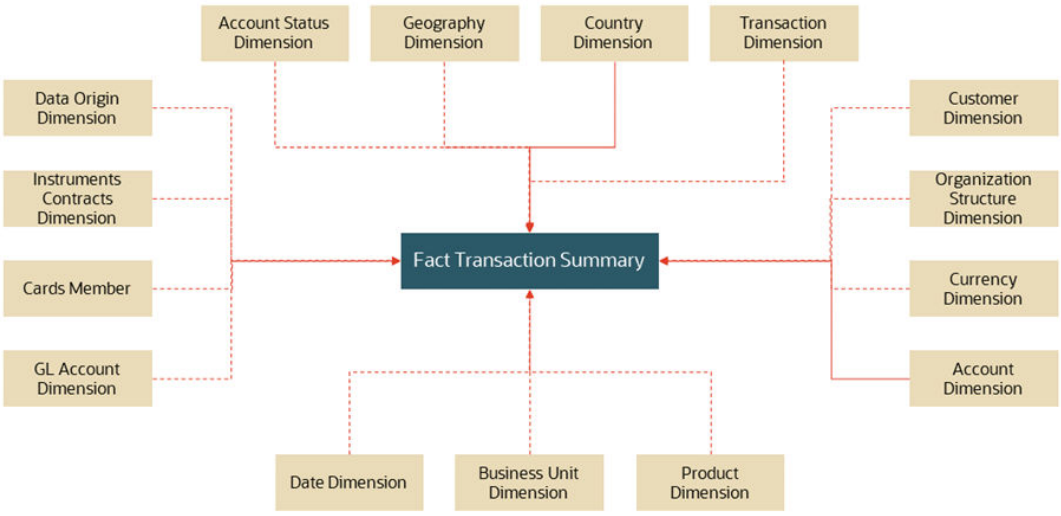


Figure 2-15 Fact Transaction Summary



3

OFS Retail Performance Analytics (OFS RPA)

This section explains the concepts of Oracle Financial Services Retail Performance Analytics and provides step-by-step instructions for navigating the Retail Performance Analytics user interface. Oracle Financial Services Retail Performance Analytics (OFS RPA) is a complete end-to-end web-based Business Intelligence solution that provides a 360-degree view of the customer relationship for key insights into the customer life-cycle.

OFS RPA 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. It also provides you deep insights into customer engagements across target segments and products/Line Of Business (LOB) including lending, credit cards, and so on. It proactively manages the growth through strategic insights into the retail business performance. OFS RPA helps you to monitor customer distribution across credit and delinquency bands and related exposures.

The OFSRPA solution is a part of the Performance Analytics Pack and is packaged along with AAI and other applications. This OFS RPA is supported for Oracle 18c and 19c.

OFSRPA solution is built using OBIEE for Dashboard and Reports activities.

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

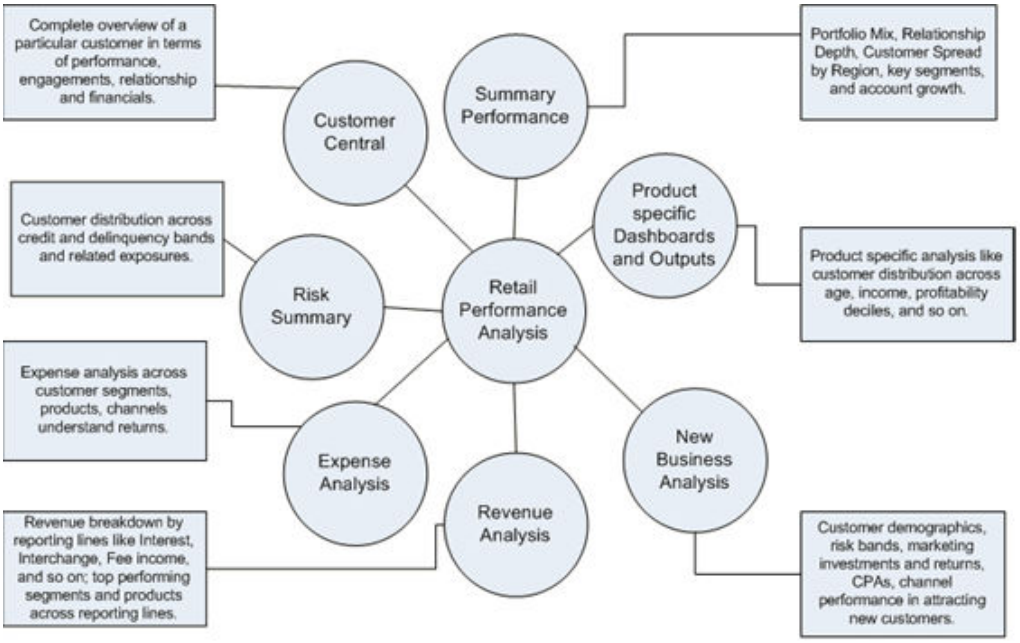
3.1 OFS RPA Process Flow

Oracle Financial Services Retail Performance Analytics (OFS RPA) utilizes OBIEE technology to:

- Gain deep insight into customer engagements across target segments and products or LOB including lending, credit cards, and so on.
- Perform Wallet share analysis and Customer Profitability.
- Understand the efficiency of investments (like marketing, branch, and channel, and so on) over time.
- Monitor customer distribution across credit and delinquency bands and related exposures.
- Perform an enterprise-wide revenue analysis across customer segments, products, and reporting lines including fee income, interest, and interchange.
- Summary performance of the LOBs, overall Profitability, and Portfolio mix.
- Customer trends across performance drivers like Sales, Balances, Deposits, Product subscriptions (revenue services), Credit scores, Delinquency bands, Losses, and so on.
- LOB-specific performance reports can be analyzed against key dimensions like customer segments, product family, region, branch, risk scores, and so on.

- Analyze expenses across customer segments, products, and channels to understand ROI.

Figure 3-1 Objectives of RPA



For details on OFSRPA reports and how OBIEE is being utilized, see Overview of OFSRPA Reports.

OFSRPA is designed for OBIEE reading data from a relational database. The relational database comprises of various dimensions and facts in the BI data model.

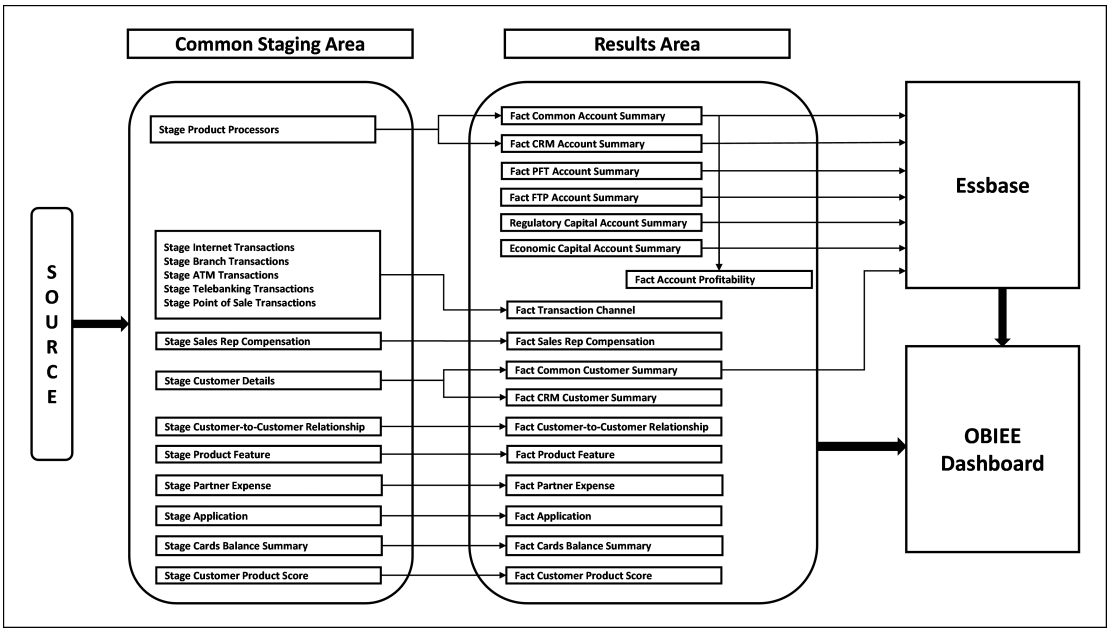
OFSRPA can be independently licensed and installed to work on top of the OFSAA Infrastructure.

3.2 Data Flow

Retail Performance Analytics data model contains the staging tables from which data is loaded into the dimensions and fact tables.

Staging tables include the master staging tables, detail staging tables, staging product processor tables, and so on. The user has to populate data into these staging tables.

Figure 3-2 Staging Tables



3.3 Dimension Data Flow

Dimension Data in the OFS RPA 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 the source system (for example, Reporting Line). These dimensions are maintained through the AMHM (Attribute Member Hierarchy Maintenance) component of OFSAAI or other framework components like DEFI.

Following is the list of dimensions used in OFSRPA.

Table 3-1 OFS RPA Dimensions

Dimension Entity Name	Staging Entity Name (or Names)	Loading or Maintenance method
Account Status Dimension	Stage Account Status Master	SCD
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
Balance Category Dimension	Stage Credit Card Balance Category Master	SCD

Table 3-1 (Cont.) OFS RPA Dimensions

Dimension Entity Name	Staging Entity Name (or Names)	Loading or Maintenance method
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
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
LoB Dimension	Stage LOB Master	SCD
Management Dimension	Stage Account Mgmt Master	SCD
Merchant Dimension	Stage Merchant Master	SCD
Merchant Category Dimension	Stage Merchant Category Master	SCD
Migration Reasons Dimension	Stage Migration Reason Master	SCD
Offer Dimension	Stage Offer Master	SCD
Reason Dimension	Stage Opportunity Win Loss Reason Master	SCD
Organization Structure Dimension	Stage Organization Structure Dimension	SCD
Partner Dimension	Stage Partner Master	SCD
Pool Identification Dimension	Stage Pool Identification Master	SCD
Prepayment Reason Dimension	Stage Prepayment Reason Master	SCD
Product Dimension	Stage Product Master	SCD
Loan Product Category Dimension	Stage Product Category Master	SCD
Product Feature Dimension	Stage Product Feature Master	SCD
Product Type Dimension	Stage Product Type Master	SCD
Prospect Dimension	Stage Prospect Master	SCD
Retention Offer Type Dimension	Stage Retention Offer Master	SCD
Sales Representative Dimension	Stage Sales Rep Master	SCD
Sales Stage Dimension	Stage Sales Stage Master	SCD
Terminal Dimension	Stage Terminal Master	SCD
Terminal Type Dimension	Stage Terminal Type Master	SCD
Transaction Dimension	Stage Transaction Master	SCD
Transaction Channel Dimension	Stage TXN Channel Master	SCD

Table 3-1 (Cont.) OFS RPA Dimensions

Dimension Entity Name	Staging Entity Name (or Names)	Loading or Maintenance method
Txn Failure Reason Dimension	Stage Transactions Failure Reason Master	SCD
Transaction Status Dimension	Stage Transactions Status Master	SCD
Vendor Dimension	Stage Vendor Master	SCD
Vintage Dimension	Stage Vintage Master	SCD
Reporting Line Dimension	Reporting Line Dimension Members, Reporting Line Member Translation, Reporting Line Member Attributes, Reporting Line Hierarchies	AMHM/DT
Band Dimension	Band Dimension Members, Band Member Translation, Band Member Attributes	AMHM/SCD
Account Dimension	Stage LC Contracts	SCD
Account Dimension	Stage Commitment Contracts	SCD
Party Dimension	Stage Party	SCD
Account Dimension	Stage OD Accounts	SCD
	Stage TD Contracts	SCD
	Stage Trusts	SCD
	Stage Loan Contracts	SCD
	Stage Mutual Funds	SCD
	Stage Bills Contracts	SCD
	Stage CASA Accounts	SCD
	Stage Guarantees	SCD
	Stage Leases Contracts	SCD
	Stage MM Contract	SCD
	Stage Annuity Contracts	SCD
	Stage Borrowings	SCD
	Stage Card Account	SCD
	Stage Investments	SCD
Region Dimension		Direct Load
Acquisition Channel Dimension		Direct Load
Instrument Category Dimension		Seeded
Currency Dimension		Seeded
Gender Dimension		Seeded
Marital Status Dimension		Seeded
Calendar Dimension		DT

Table 3-1 (Cont.) OFS RPA Dimensions

Dimension Entity Name	Staging Entity Name (or Names)	Loading or Maintenance method
Account Dimension	Staging Product Processor Tables like: • Stage Annuity Contracts • 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 • Stage Trusts • Stage Swaps Contracts • Stage Repo Contracts • Stage Option Contracts • Stage Mutual Funds • Stage Futures And Forwards	SCD

Some of the stage data can also come from master data management interfaces. In such cases, data from the interface is loaded into staging interface tables and SCD is 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.

3.4 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 CRM Account Summary, and so on.

Some of the Fact tables are loaded with processed fact information from other fact tables. Examples include Fact CRM Customer Summary, and so on.

Table 3-2 FACT Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Account	Summary	Stage	T2T
		Stage Annuity Contracts	
		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	
		Stage Trusts	
Fact CRM Account Summary	Stage	Stage Commitment Contracts	T2T
		Stage Mutual Funds	
		Stage Annuity Contracts	
		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	
Fact Common Customer Summary	Stage	Stage Commitment Contracts	T2T
		Stage Mutual Funds	
		Stage Customer Details	
		Stage Party Rating Details	
		Stage Party Financials	

Table 3-2 (Cont.) FACT Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact CRM Customer Summary	Stage and Fact	Stage Customer Master Stage Customer Details Fact Common Account Summary Fact Transaction Channel	T2T/DT
Fact Application	Stage	Stage Applications	T2T
Transaction Channel	Stage	Stage Internet Transactions Stage Branch Transactions Stage ATM Transactions Stage Telebanking Transaction Stage Point Of Sale Transactions	T2T
Fact Cards Balance Summary	Stage	Stage Credit Card Balance Summary	T2T
Fact Account Feature Map	Stage	Stage Account Feature Map	T2T
Fact Customer to Customer Relationship	Stage	Stage Customer to Customer Relationships	T2T
Fact Account Profitability	Fact	Fact Common Account Summary Fact FTP Account Summary Fact PFT Account Summary	DT
Exchange Rate History	Stage	Stage Exchange Rates	T2T
Fact Account Segment Score	Fact	Fact Common Account Summary	T2T
Fact Account Segment MOB Summary	Fact	Fact Account, Fact Profitability, Fact Common Account Summary, Fact Account Segment Score	DT
Fact Party Account Role Map	Stage	Stage Party Account Role Map	T2T
Fact Party Financials	Stage	Stage Party Financials	T2T

This table will be populated in presence of the RCA application with the T2T. In absence of RCA, this table has to be directly loaded if the data is available.

The OFSRPA uses some materialized views registered as Derived Entity, that must be refreshed as and when the dependent table has fresh data. The MVs can be refreshed by running the batches crated for the purpose. The list of Derived Entity and the dependent objects can be found in the following table.

Table 3-3 Derived Entities and Dependent Objects

MATERIALIZED_VIEW	REFERENCED_NAME	REFERENCED_OBJECT_NAME
ACNTSMRM	FCT_COMMON_ACCOUNT_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
CUSTDETM	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_GENDER	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
FCSTCUSR	VW_ACCT_VAL_FCST_CUSTAGG_RPA	Table
FCSTLTMR	VW_FORECAST_LTV_RPA	Table
FCSTREPR	VW_ACCT_VAL_FCST_REPAGG_RPA	Table
FSIUSRD	FSI_USER_DATA_ACCESS	Table
MGMTPFTM	ACNTSMRM	Table
	CUSTDETM	Table
	FCT_ACCOUNT_MGR_REL	Table
	FCT_ACCOUNT_PROFITABILITY	Table
MVRACPRO	A_DIM_REP_CURRENCY	Table
	DIM_ACCOUNT	Table
	DIM_CONSOLIDATION	Table
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table
	DIM_VINTAGE	Table
	FCT_ACCOUNT_PROFITABILITY	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
	MVUSRACC	Table
MVRCUSAG	A_DIM_REP_CURRENCY	Table
	DIM_ACCOUNT	Table
	DIM_CONSOLIDATION	Table
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table

Table 3-3 (Cont.) Derived Entities and Dependent Objects

MATERIALIZED_VIEW	REFERENCED_NAME	REFERENCED_OBJECT_NAME
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table
	DIM_VINTAGE	Table
	FCT_ACCOUNT_PROFITABILITY	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	FCT_CRM_ACCOUNT_SUMMARY	Table
	MVUSRACC	Table
MVRPROAG	A_DIM_REP_CURRENCY	Table
	DIM_ACCOUNT	Table
	DIM_CONSOLIDATION	Table
	DIM_CURRENCY	Table
	DIM_CUSTOMER	Table
	DIM_CUSTOMER_TYPE	Table
	DIM_DATES	Table
	DIM_LOB	Table
	DIM_ORG_UNIT	Table
	DIM_PRODUCT	Table
	DIM_REP_LINE	Table
	DIM_VINTAGE	Table
	FCT_ACCOUNT_PROFITABILITY	Table
	FCT_COMMON_CUSTOMER_SUMMARY	Table
	MVUSRACC	Table
MVUSRACC	DIM_ACCOUNT	Table
	FCT_COMMON_ACCOUNT_SUMMARY	Table
	FSIUSRD	Table
RTHREPMV	WITH_REP_LINE_DIRECT_IND_RPA	Table
USRMGRMV	FSI_M_USER_MANAGER_MAP	Table

3.5 BI Data Model

The BI data model is a star schema for the fact table FCT_<APPLICATION>_ACCOUNT_SUMMARY.

Following are the subject areas in the erwin data model:

Figure 3-3 Fact Account Feature Map

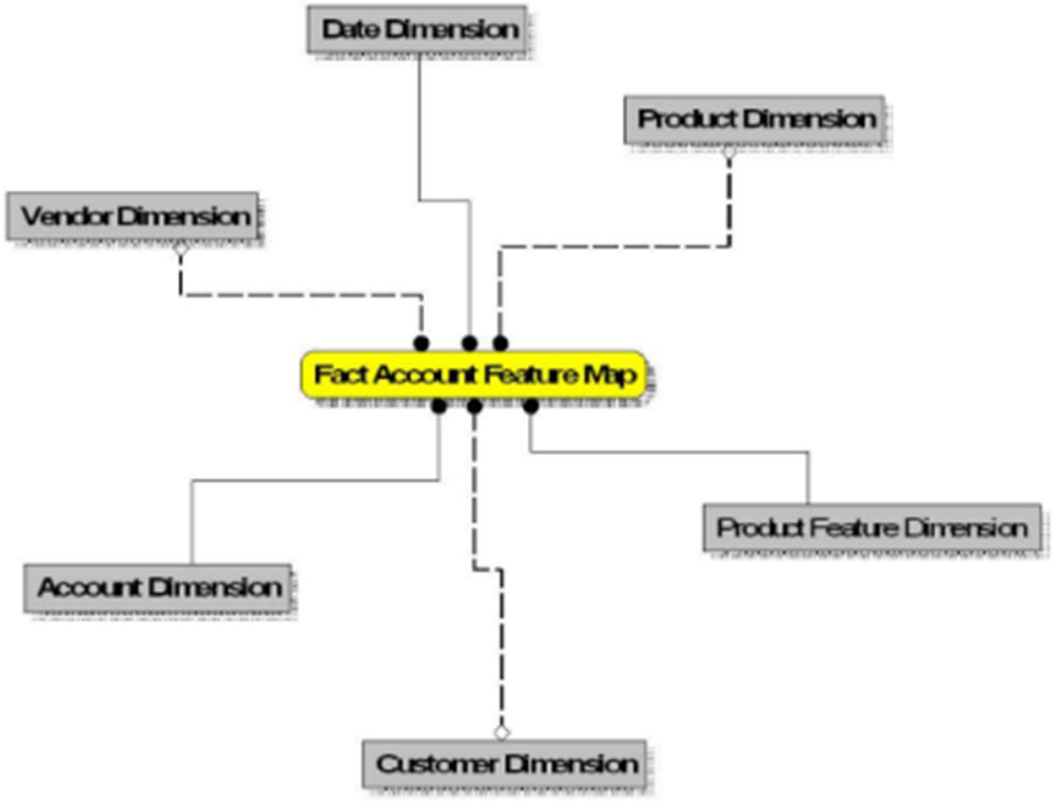


Figure 3-4 Fact Account Manager Relationship

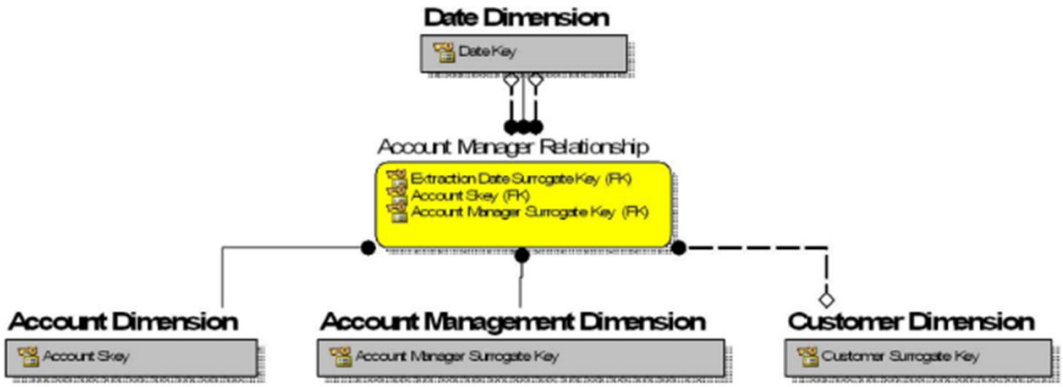


Figure 3-5 Fact Account Party Role

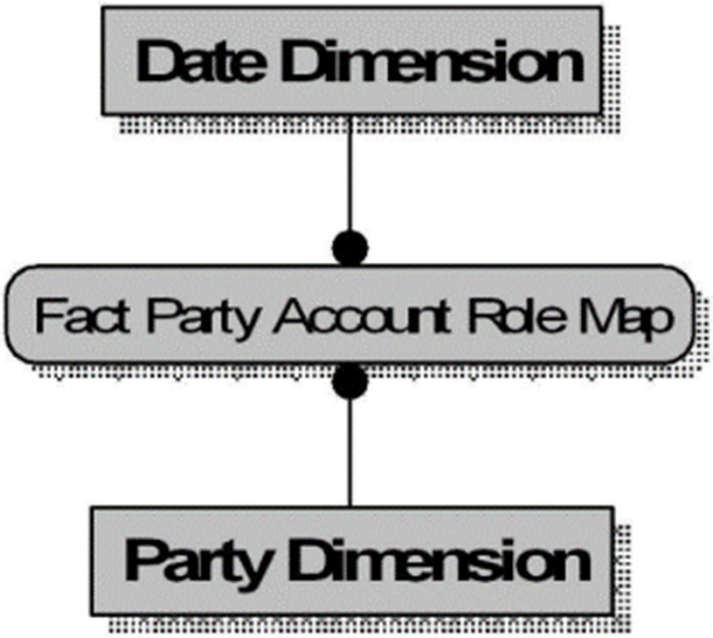


Figure 3-6 Fact Account Profitability

Figure 3-7 Fact Account Segment MOB Summary

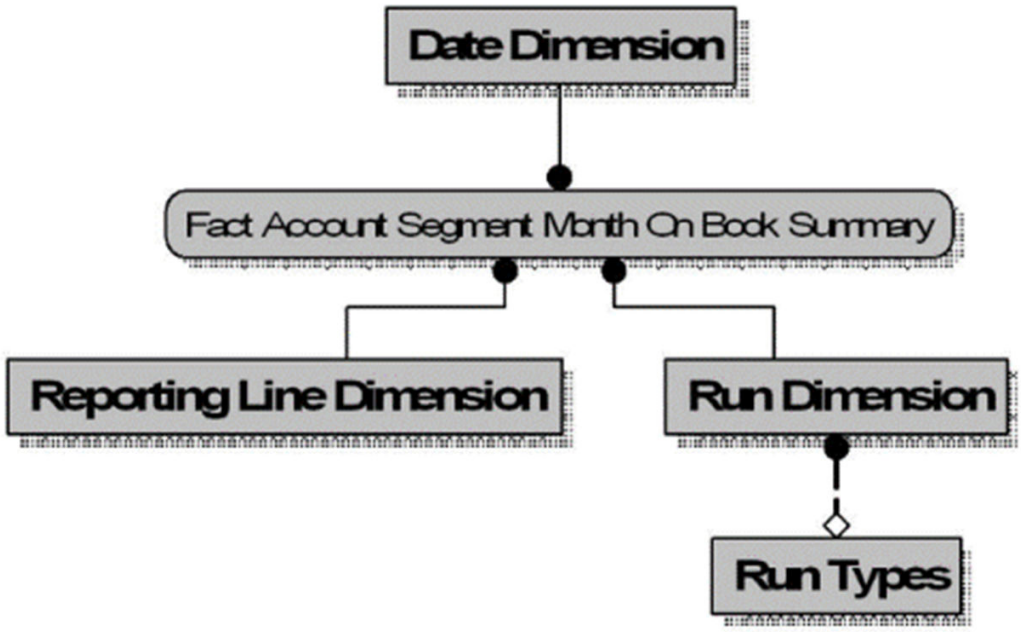


Figure 3-8 Fact Account Segment Score

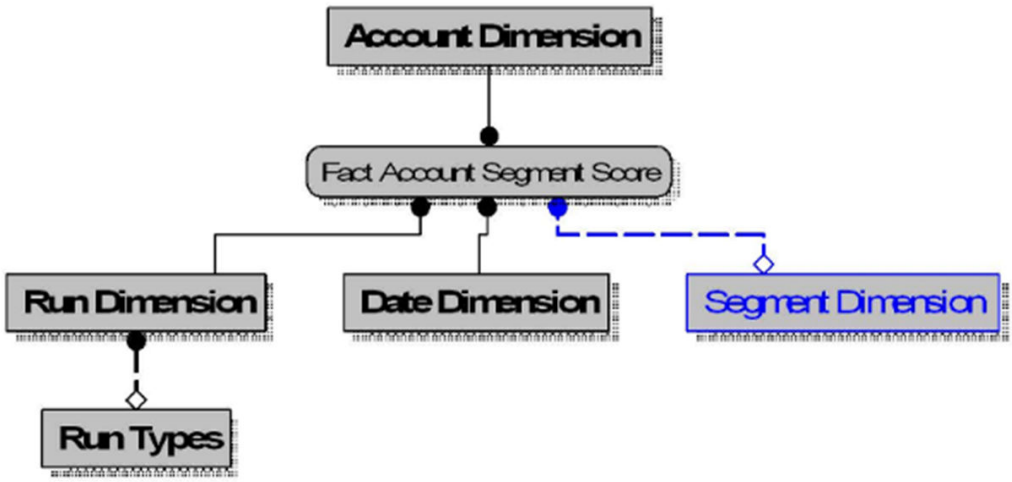


Figure 3-9 Fact Applications Summary

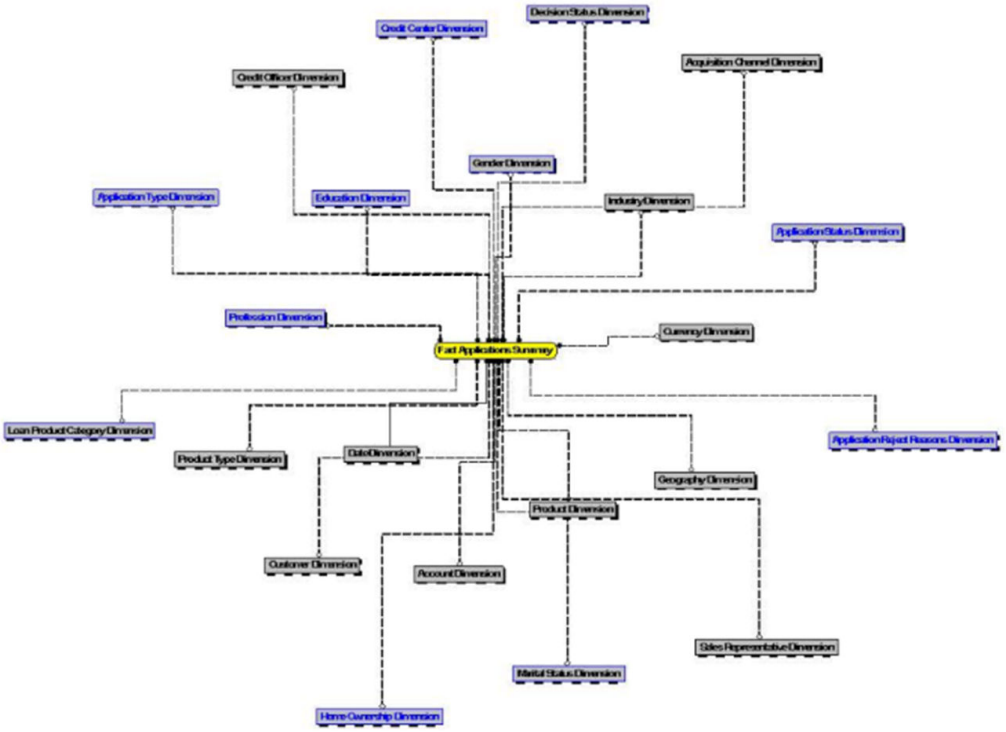


Figure 3-10 Fact Common Account Summary

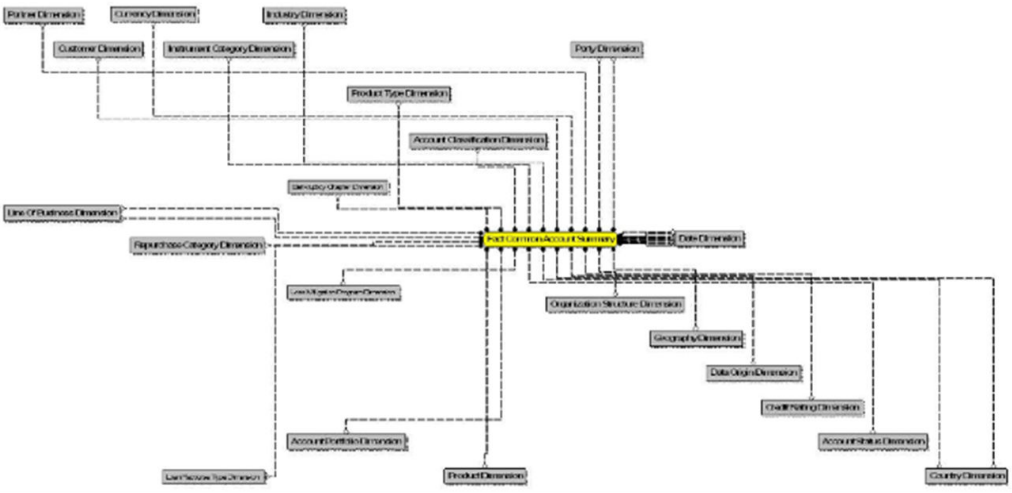


Figure 3-11 Fact Common Customer Summary

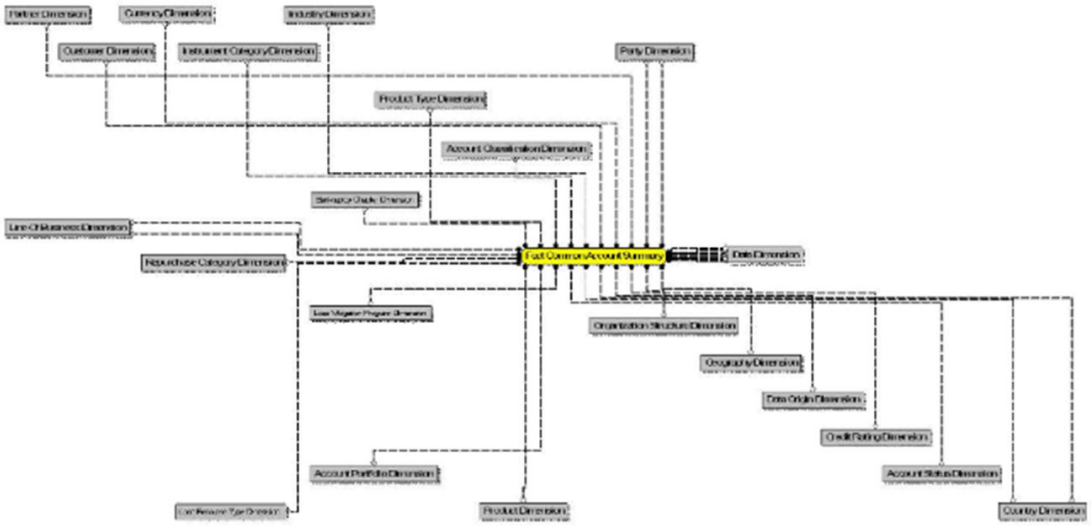


Figure 3-12 Fact CRM Account Summary

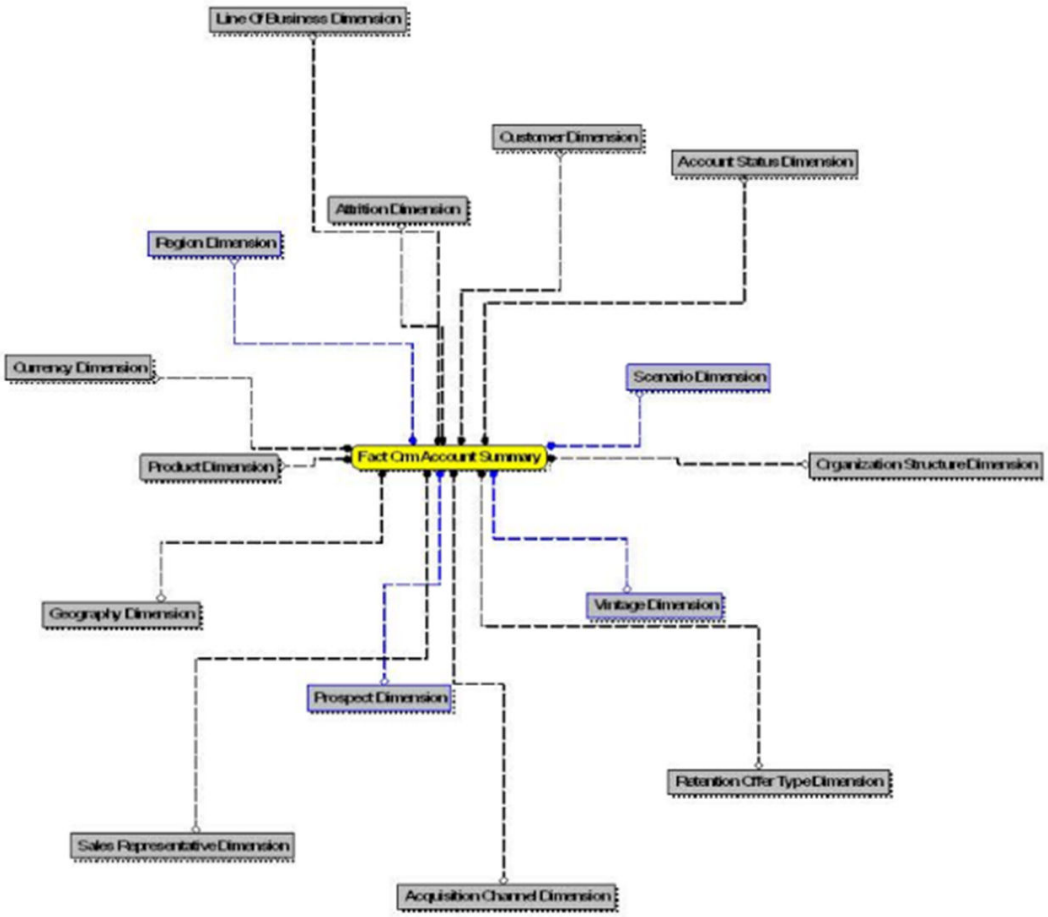


Figure 3-13 Fact Customer to Customer Relationship

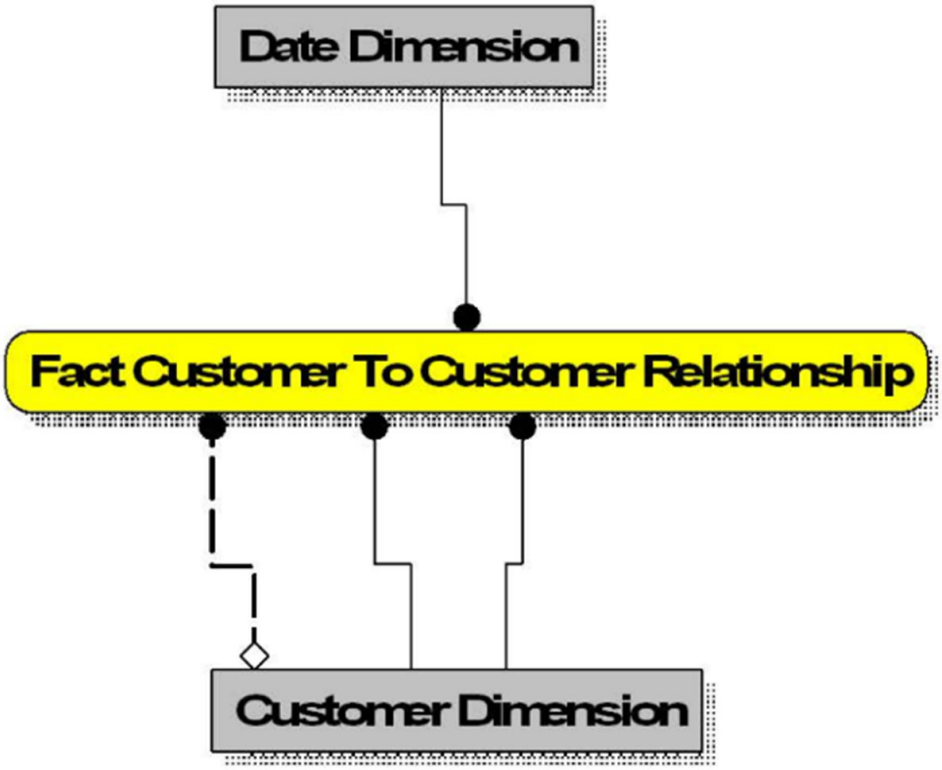


Figure 3-14 Fact Economic Capital Account Summary

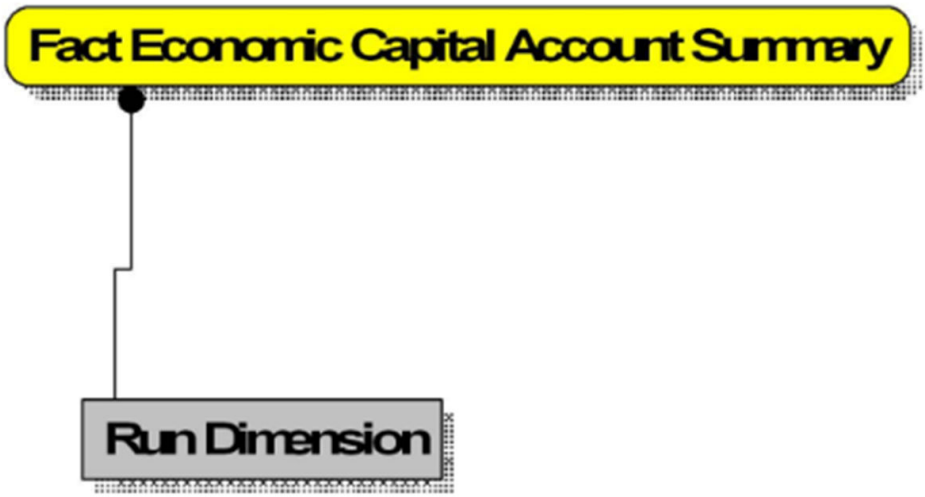


Figure 3-15 Fact Opportunity

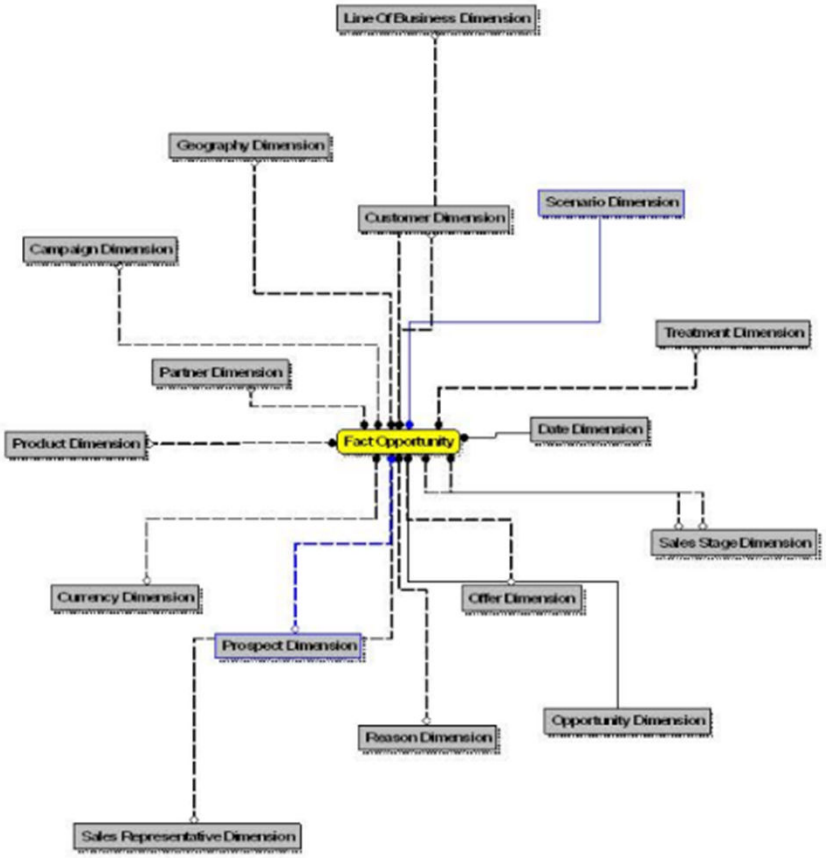


Figure 3-16 Fact Opportunity Activity

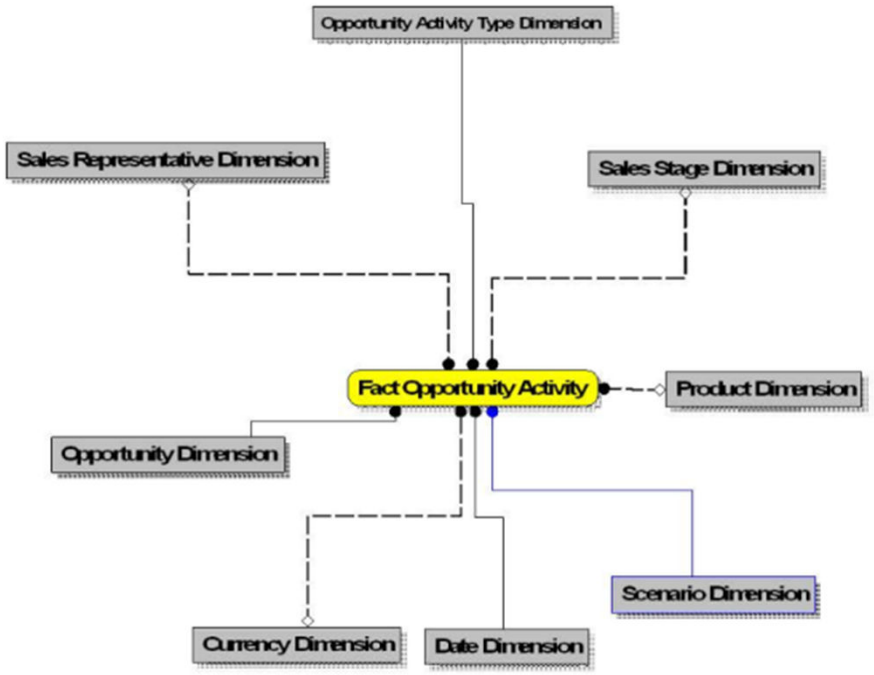


Figure 3-17 Fact Regulatory Capital Account Summary

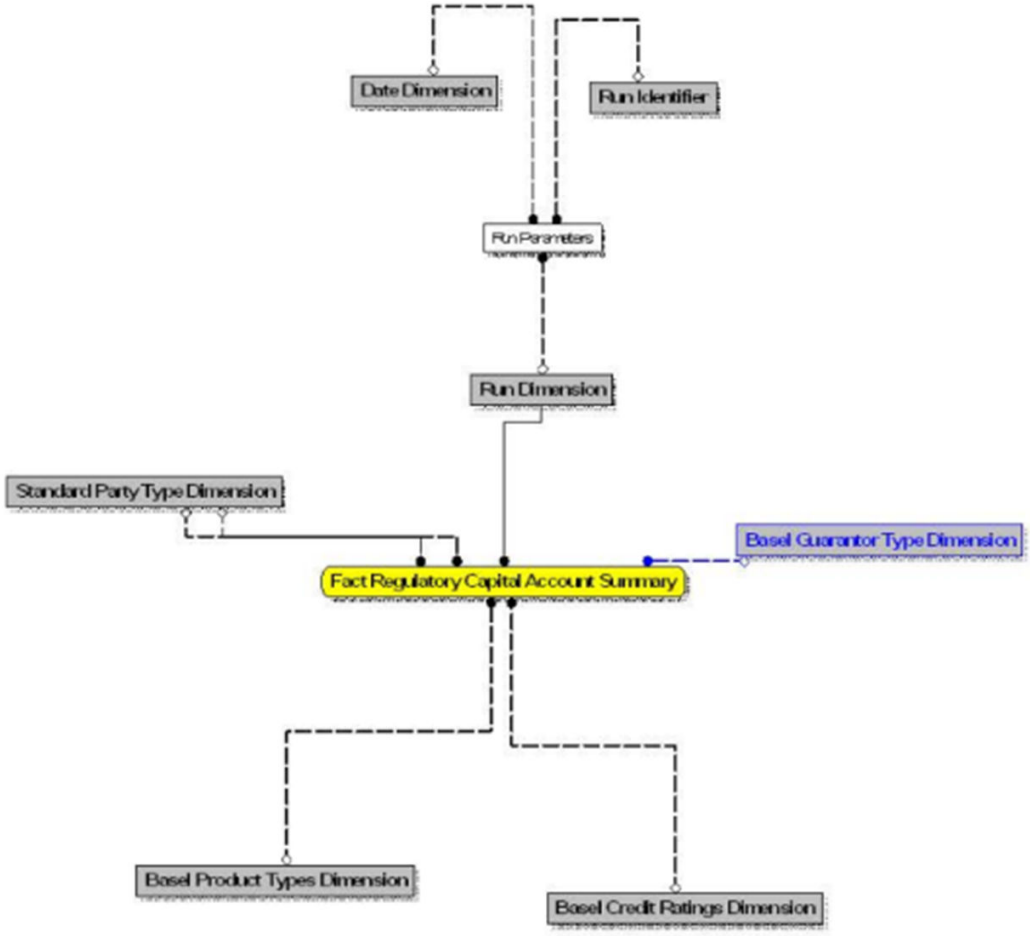


Figure 3-18 Fact Sales Representative Compensation

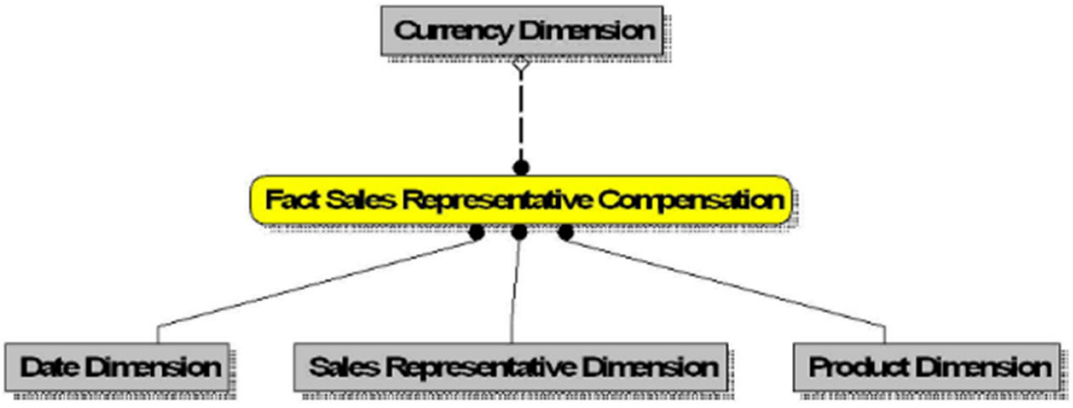


Figure 3-19 Fact Transaction Summary

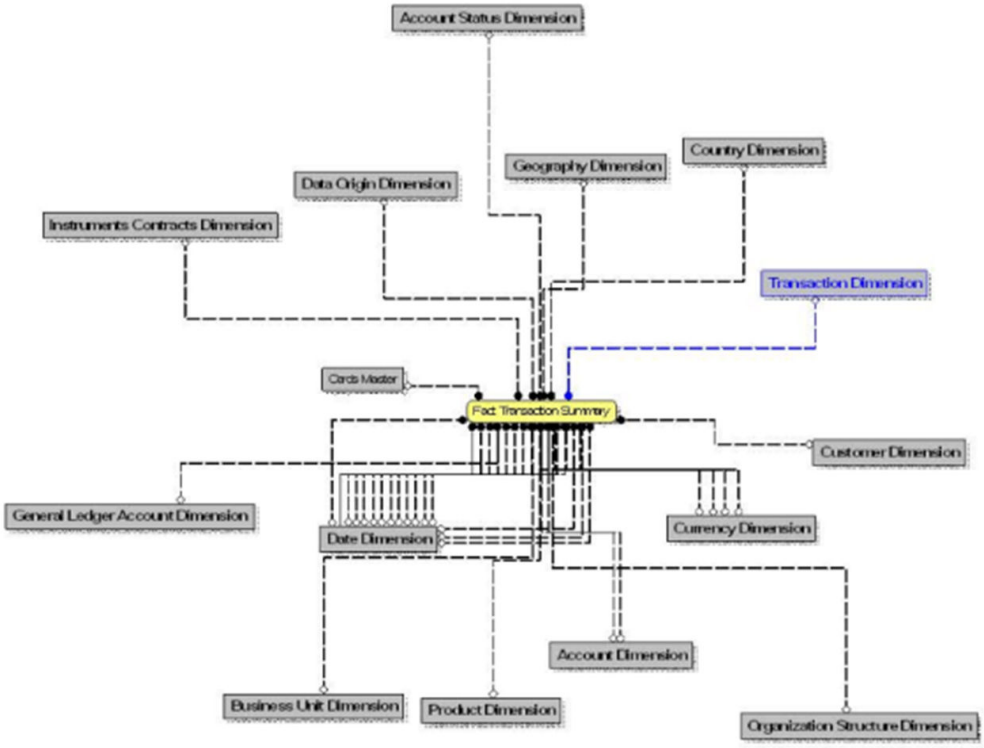


Figure 3-20 Funds Transfer Pricing (FTP) Account Summary

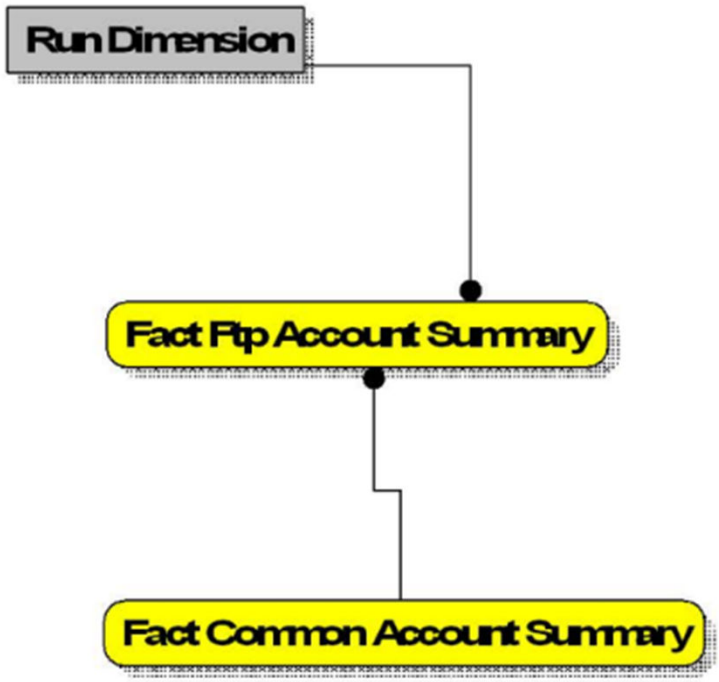


Figure 3-21 Profitability Management (PFT) Account Summary

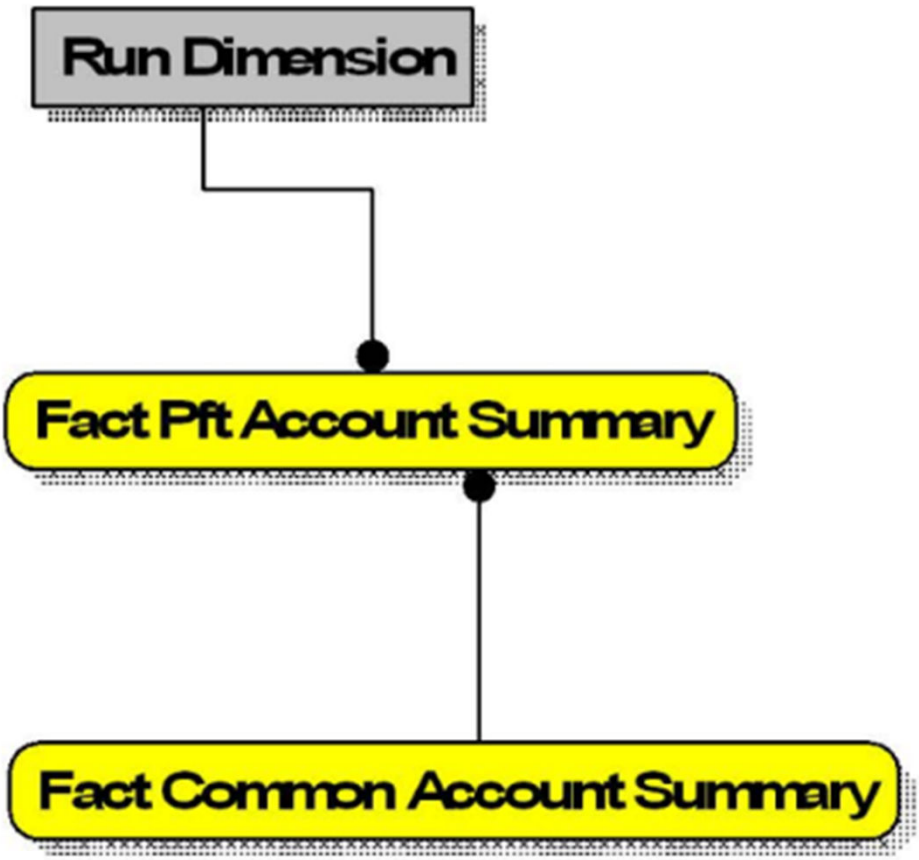
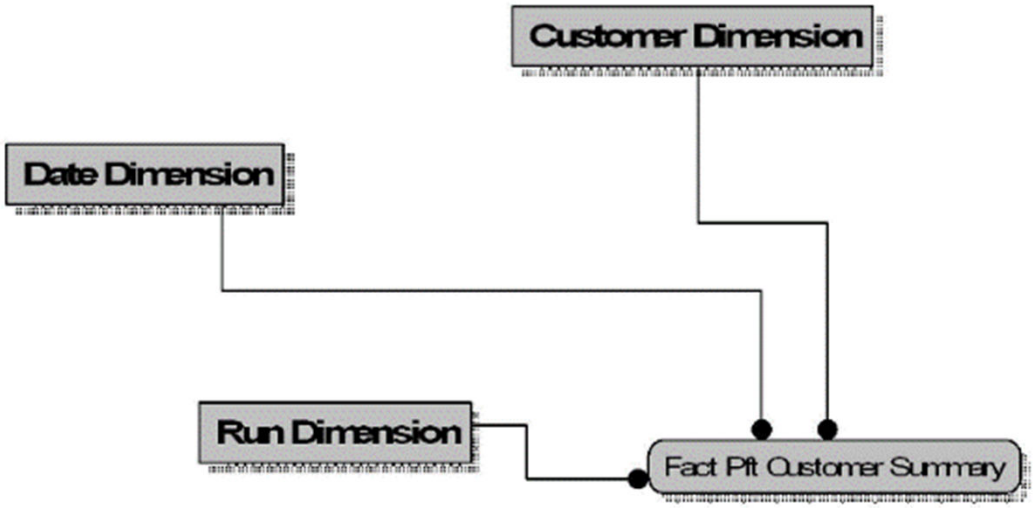


Figure 3-22 PFT Customer Summary



4
Components of OFSAAI

You can build the IPA Application by using the OFS AAI Infrastructure by assembling business definitions or business metadata starting from Data Model to lower grain objects like Dimensions, Metrics, Security Maps, and User Profile to higher-order objects like Rules, Models, and Analytic Query Templates which are assembled using the lower grain ones. In addition to application definition tools, it provides the entire gamut of services required for Application Management including Security Service, Workflow Service, Metadata Management, Operations, Life-cycle Management, public API's and Web Services that are exposed to extend and enrich the tooling capabilities within the applications.

You can use the following components or frameworks to build your IPA Application:

- Data Model Management
- Data Management
- Rules Run Management
- Operations
- Logging

4.1 Data Model Management

Data Model Management framework within the Infrastructure system facilitates you to upload the warehouse data from the operational systems to Database Schema using JSON (ODM)/ ERwin XML file or Database Catalog.

You can perform tasks such as uploading the Data Model, configuring session parameters, viewing log files, and so on. For more information on the various tasks and concepts for Data Model Management, see the OFS Advanced Analytical Applications Infrastructure User Guide.

4.2 Data Management

The Data Management Framework within the Infrastructure system is a comprehensive Data Integration platform that facilitates all the Data Integration requirements from high-volume and high-performance batch loads to event-driven integration processes and SOA-enabled data services.

You can perform tasks such as defining your Data Source, Mapping of Data, manage Slowly Changing Dimensions (SCDs), and so on. For more information on the various tasks and conceptual information for Data Management, see the OFS Advanced Analytical Applications Infrastructure User Guide.

4.3 Rules Run Management

The Rules Run Framework within the infrastructure system facilitates you to define a set of rules, reporting objects, and processes that are required to transform data in a warehouse. You can execute Rules and processes and manage the pre-defined rules within the system.

You can perform tasks such as create and manage Rules, Runs, and so on. For more information on the various tasks and conceptual information for Rule Run Framework, see the OFS Advanced Analytical Applications Infrastructure User Guide.

4.4 Operations

Operations refer to the administration and processing of Business Data to create the highest level of efficiency within the system and to derive results based on a specified rule. Operations framework within the Infrastructure system facilitates you to achieve the following:

- Configure and operate the business processes effectively.
- Maintain the Operator Console by defining and executing Batches through the Operations menu.
- Monitor the Batches scheduled for execution.

You can perform tasks such as create and maintain batch definitions, execute the batches, and view the execution result logs, and so on. For more information on the various tasks and conceptual information for batch operations, see the OFS Advanced Analytical Applications Infrastructure User Guide.

4.5 Logging

Logging in OFSAA is done using Log4J. For more information on Logging in OFSAA, see OFS Advanced Analytical Applications Infrastructure User Guide.

5
Creating Custom Reports in OAS

For the procedure to create Custom Reports in OAS, see the following documentation:

https://docs.oracle.com/en/middleware/bi/analytics-server/build-reports-and-dashboards.html

For refreshing the Data Source, see the following documentation:

https://docs.oracle.com/en/middleware/bi/analytics-server/user-oas/reload-individual-table-dataset.html

6
Visibility

Visibility is implemented to restrict the user’s access to the data. The user can view based on the role and the privileges assigned to the user.

6.1 Data Visibility

Data visibility refers to the data control established on the results fetched by reports depending on the user logged in.

For each user, only those accounts, which are directly handled or are handled by a subordinate, are visible. If the logged-in user is a Manager, then only those accounts which are associated with that user's organizational hierarchy will be fetched. This is achieved through the OBIEE role ‘OFSAA CI Data Visibility - MGR' and using the FSI_M_USER_MANAGER_MAP table.

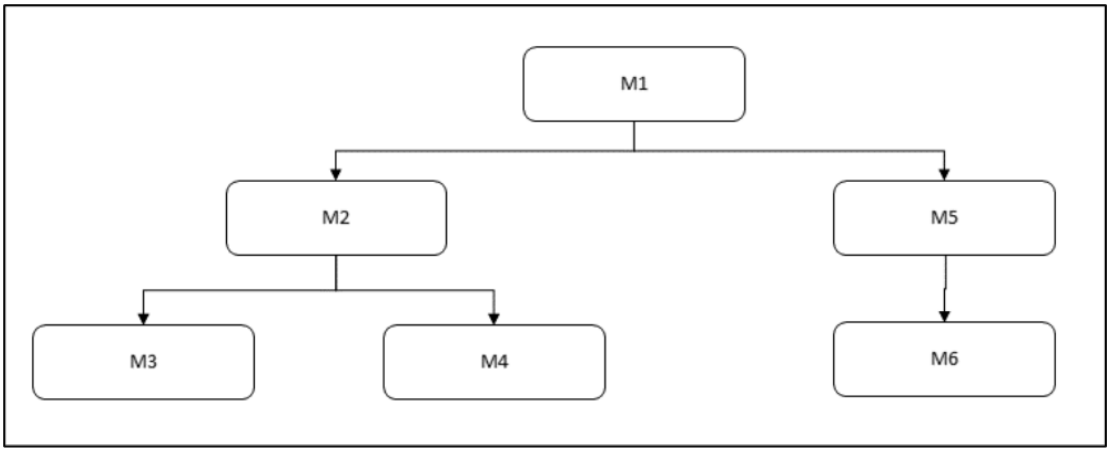
The user has to be mapped to the user group which is assigned to the 'OFSAA CI Data Visibility - MGR' role. For more information, see the *Creating OBIEE Roles* section in the OFS Performance Analytics Installation and Configuration Guide, Release 8.1.1.0.0. After the user is created in OBIEE, then the particular log-in ID and the manager code from the DIM_MANAGEMENT table have to be populated into the FSI_M_USER_MANAGER_MAP table if that user requires restricted access.

A user logging in without assigned the 'OFSAA CI Data Visibility - MGR' role should have access to the entire data available. However, a user logging in without any associated Manager code in the FSI_M_USER_MANAGER_MAP table will end up with report errors.

The entries to the FSI_M_USER_MANAGER_MAP table have to be manually inserted (for more details, see the Data Population as per Visibility Changes section in the OFS Performance Analytics Installation and Configuration Guide, Release 8.1.1.0.0.

The following diagram depicts a hierarchy of Managers:

Figure 6-1 Process Flow for Hierarchy of Managers



The data visibility for each of the Managers, starting from the top of the hierarchy is as follows:

- M1 user has control over the data associated with that user along with the data associated with the immediate subordinates, that is, M2, M5, and their subordinates till the end of the hierarchy.
- M2 user has control over the data associated with that user along with the data associated with the immediate subordinates, that is, M3, M4, and their subordinates till the end of the hierarchy.
- M5 user has control over the data associated with that user along with the data associated with the immediate subordinate, that is, M6 and his subordinates till the end of the hierarchy.

See the OBIEE documentation about Setting Up Row-Level Security (Data Filters) in the Repository if data visibility must be extended.

7

APIs for OFS PA

The following table lists the Web Services (APIs) available for OFS PA:

Table 7-1 Web Services (APIs) Available for OFS PA

Web Service	Input	Output Version
Account Level Metrics (without UDM)	Account Number, Date	ROTA, RAROC, ROE, Total Expenses, Total Income, Net Income
Customer Level Metrics (without UDM)	Customer Number, Date	ROTA, RAROC, ROE, Total Expenses, Total Income, Net Income
Account Segmentation	Account Number, Date	Account Segment Code
Customer Segmentation	Customer Number, Date	Customer Segment Code
Metrics on existing Customer/ Account with UDM	Account Number, Date of Report, {Date of UDM, UDM} repeated for all UDMs	ROTA, RAROC, ROE, Total Expenses, Total Income, Net Income, Customer ROTA, Customer RAROC, Customer ROE, Customer Total Expenses, Customer Total Income, Customer Net Income
Metrics for New Account of existing Customer	Customer Number, Date of Report, Account Schedule	ROTA, RAROC, ROE, Total Expenses, Total Income, Net Income, Customer ROTA, Customer RAROC, Customer ROE, Customer Total Expenses, Customer Total Income, Customer Net Income
Metrics for New Account of New Customer	Date of Report, Account Schedule	Account Level ROTA, RAROC, ROE, Total Expenses, Total Income, Net Income

For more information about the Performance Analytics APIs, see the OFS PA API Reference Guide.