Oracle Financial Services Revenue Management and Billing Cloud Service

OR

Oracle Insurance Revenue Management and Billing Cloud Service

Version 5.1.0.0.0

Oracle Analytics Server - Reporting Solution

Revision 1.0

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Oracle Financial Services Revenue Management and Billing Cloud Service/Oracle Insurance Revenue Management and Billing Cloud Service Oracle Analytics Server - Reporting Solution.

Note: The above two products are collectively referred as Oracle Revenue Management and Billing Cloud Service, Premium Edition throughout this document.

F88557-01

Preface

About This Document

This document will help to understand the ORMB SaaS reporting architecture, Oracle Golden Gate, Oracle Analytics Server, OAS reporting solution that includes the OAS RPD key points, creating a sample dashboard report based on OAS RPD, along with the limitations/recommendations.

Intended Audience

This document is intended for the following audience:

- End-Users
- System Administrators
- Consulting Team
- Implementation Team

Organization of the Document

The information in this document is organized into the following sections:

Section No.	Section Name	Description
Section 1	SaaS Reporting Architecture	Explains the architecture of SaaS reporting solution
Section 2	Oracle Golden Gate	Provides an overview of Golden Gate replication
Section 3	Oracle Analytics Server	Provides an overview about Oracle Analytics Server
Section 4	OAS Reporting Solution - OAS RPD	Explains OAS reporting solution based on OAS RPD
Section 5	OAS RPD - Key Points	Key Points that need to be taken care in OAS RPD
Section 6	Creating a sample dashboard report	Explains how a dashboard report can be created
Section 7	Subject Areas	Provides insight about Subject Areas of OAS RPD
Section 8	Limitations/Recommendations	Provides insight about the limitations or recommendations that need to be considered

Related Documents

You can refer to the following documents for more information:

Document Name	Description
Oracle Analytics Visualizing Data in Oracle Analytics Server	Describes how to visualize data in Oracle Analytics Server.

Document Name	Description
Oracle Analytics Using Oracle Analytics Publisher in Oracle Analytics Server	Explains how to view, schedule, deliver, publish, and share reports created in Oracle Analytics Publisher.
Oracle Analytics Designing and Publishing Pixel-Perfect Reports in Oracle Analytics Server	Documentation for data modelers and report designers for modeling data and creating report layouts for pixel-perfect reports using Oracle Analytics Publisher.

Conventions

The following conventions are used across the document:

Convention	Meaning
boldface	Boldface indicates graphical user interface elements associated with an action, or terms defined in the text.
italic	Italic indicates a document or book title.
monospace	Monospace indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or information that an end-user needs to enter in the application.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Contents

1. SaaS Reporting Architecture

Oracle Revenue Management and Billing SaaS Reporting module follows a layered architecture, which consists of the following logical layers:

- **Data Source Layer** - The data source layer is a layer where the data from online transaction processing system resides. In the ORMB SaaS reporting architecture, the data source layer is the ORMB database.
- **Replication/Target Layer** - The replication layer is a layer where the data from the ORMB database is replicated for reporting through Oracle Golden Gate.
- **Presentation and Access Layer** - The presentation layer is a layer where you can design, develop, and generate various reports using the ORMB data from the reporting schema. Oracle Analytics Server (OAS) is an embedded tool in an ORMB SaaS environment. It is a powerful tool that empowers business analysts and consumers to uncover new insights and make faster, more informed business decisions.

Note: The reporting users and business analysts who are developing or generating the reports should be assigned with the 'BI Content Author' and 'BI Consumer' application roles, respectively, in Oracle Identity Cloud Service

The following diagram graphically represents the layered architecture of the ORMB SaaS Reporting module:

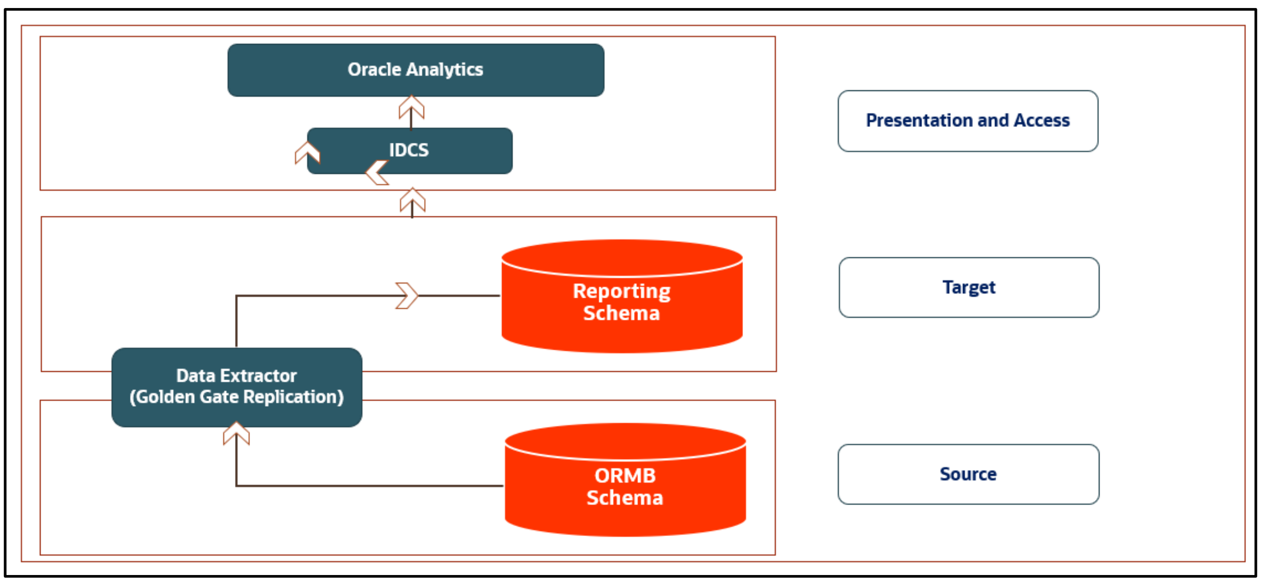

Figure 1: ORMB SaaS Reporting Module

2. Oracle Golden Gate

The data from the ORMB SaaS database is replicated to the SaaS reporting database using Oracle Golden Gate Extractors and Replicators. Oracle Golden Gate is a software product that allows you to replicate, filter, and transform data from one database to another database. It enables the exchange and manipulation of data at the transaction level among databases. It moves committed transactions with transaction integrity and minimal overhead on the existing infrastructure. It is a comprehensive software package for real-time data integration and replication and enables migration between databases in near zero-downtime.

In an ORMB SaaS environment, Oracle Golden Gate is configured to achieve the following objectives:

- Continuous extraction and replication of transactional Data Manipulation Language (DML) operations and data definition language (DDL) changes (for supported databases) to keep source and target data consistent.
- Perform a unidirectional replication from the ORMB database to the reporting database, as shown in the following figure:

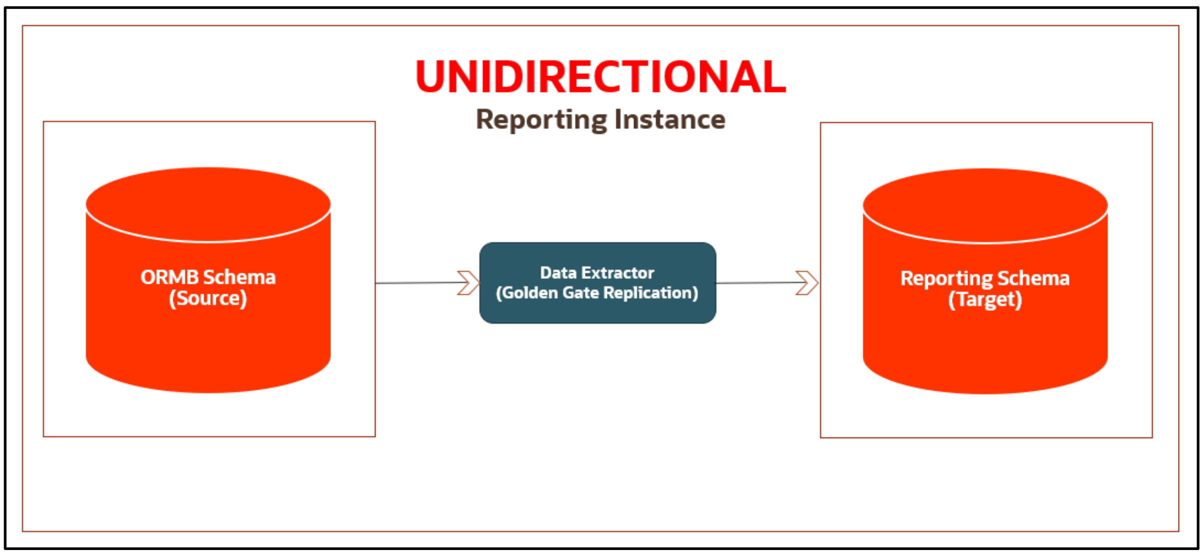

Figure 2: Oracle Golden Gate Replication

Oracle Golden Gate Microservices Architecture that provides REST-enabled services as part of the Oracle Golden Gate environment is used. REST-enabled services provide remote configuration, administration, and monitoring through HTML5 web pages, command line, and APIs.

In the ORMB SaaS environment where the reporting option is enabled, separate databases for ORMB online transaction processing and reporting are maintained, and therefore it will not impact the performance of ORMB.

3. Oracle Analytics Server

Oracle Analytics Server (OAS) is an embedded tool in an ORMB SaaS environment. It provides capabilities required to address the entire analytics process from data ingestion and modelling, through data preparation and enrichment, to visualization and collaboration without compromising security and governance. Embedded machine learning and natural language processing technologies help increase productivity and build an analytics-driven culture in organizations.

Through the Oracle Analytics Server (OAS) tool, you can design, develop, and generate various reports using RPD file available in the ORMB Cloud environment or the data from the target database. The user access to the Oracle Analytics Server (OAS) tool is restricted based on the assigned application roles.

For more information on how to create reports in Oracle Analytics Server, refer to the following URLs:

- https://docs.oracle.com/en/middleware/bi/analytics-server/user-oas/create-analyses.html
- https://docs.oracle.com/en/middleware/bi/analytics-server/index.html
- https://www.oracle.com/business-analytics/analytics-platform/capabilities/

4. OAS Reporting Solution - OAS RPD

Oracle Analytics Server (OAS) RPD is the key component of the OAS reporting solution. OAS RPD contains the metadata design of few ORMB entities that can provide insight about Billing, Payments, Adjustments, Transactions, Deals, To Do, User Access. Once the OAS RPD is deployed, upon connecting to Oracle Analytics Server analytics, reports can be created based on the subject areas that are presented in OAS RPD.

A query will be formed by the server based on the design that is modelled in OAS RPD, which will be issued against the database and corresponding results are fetched in the reports. All the relevant reports can be grouped under Dashboards and granted with read access to end users. This solution can also allow end user to create Ad-hoc reports as per their need, provided having the required application roles assigned.

Note: OAS RPD is certified to be deployed from OAS 5.9 version till latest OAS 6.4 version.

5. OAS RPD - Key Points

Below are the key points that need to be considered while using OAS RPD:

- Oracle Analytics Client Tool is required to be installed on local windows to read/edit/enhance OAS RPD metadata
- Below highlighted are the connection pools that are part of the OAS RPD:

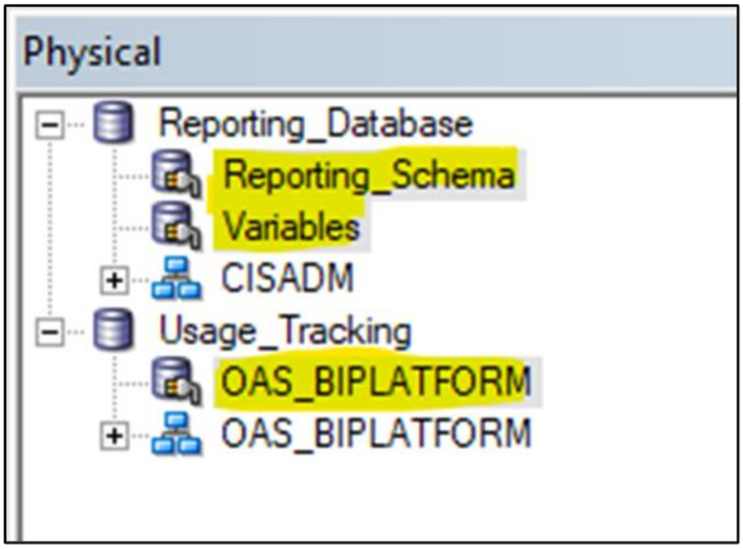

Figure 3: Connection Pools of OAS RPD

- To view how the ORMB physical tables and columns are logically mapped on the presentation tier through the RPD business model, refer to the Oracle Revenue Management and Billing Cloud Service OAS RPD Metadata file.

Note: Custom Date Entities like Bill Date, Payment Event Date etc., have been introduced in each of the subject areas and are advised to be leveraged to make the reports time bounded.

6. Creating a sample dashboard report

Below are the steps that need to be followed while creating a dashboard report:

1. To create any dashboard report, user must be assigned with 'BI Content Author' application role or above.
2. Login to the Oracle Analytics application, select the **Analysis** option from the **Create** menu.

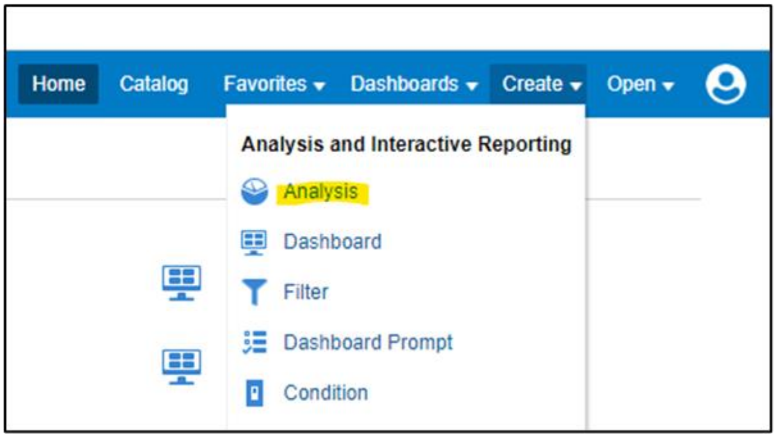

Figure 4: Analysis and Interactive Reporting Menu

3. From the **Select Subject Area** window, select the required **Subject Area** (for example, **Payment**).

Figure 5: Selecting Subject Area

4. Drag-Drop/Double click the required columns from the tables under the selected subject area.

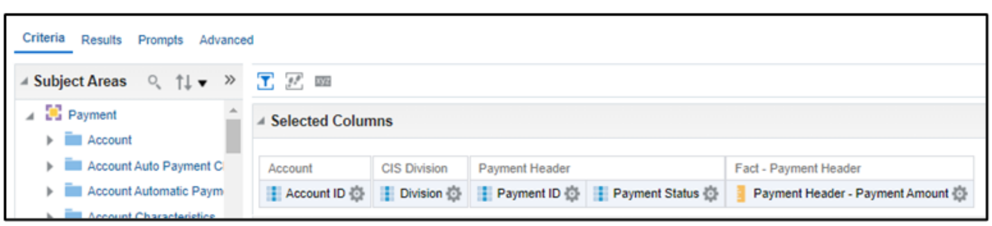

Figure 6: Selecting Columns

5. Click on the **Results** tab to verify data and then save the report by providing a relevant name to it (for example, **Account Level Payments**).

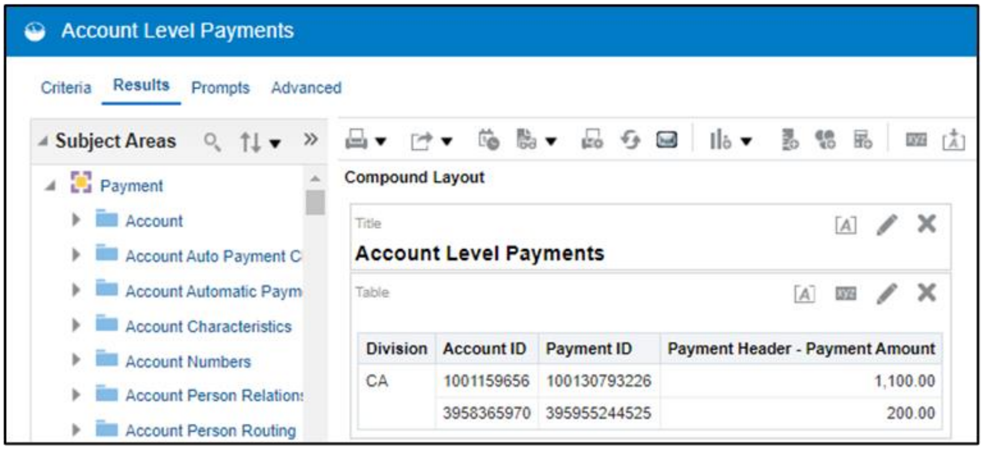

Figure 7: Saving a Report

6. Select the **Dashboard Prompt** option from the **Create** menu.

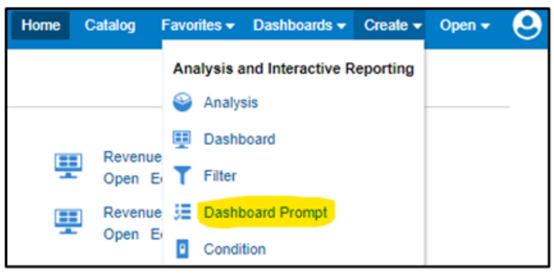

Figure 8: Selecting Dashboard Prompt

7. From the Select Subject Area window, select the required **Subject Area** (for example, **Payment**).

Figure 9: Selecting Subject Area

8. Select the required columns from the tables under the selected subject area.
9. Set the default values on required parameters and set them as **Mandatory**.
10. Save the dashboard prompt.

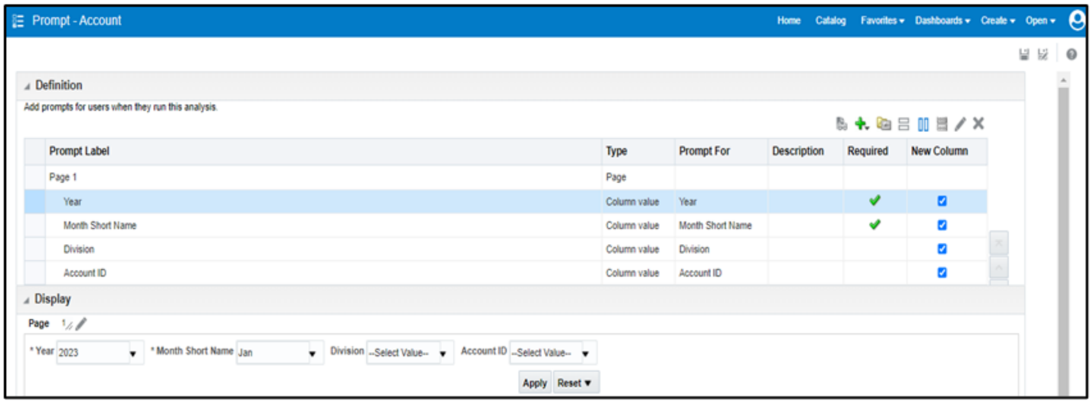

Figure 10: Saving the Dashboard Prompt

11. Select the **Dashboard** option from the **Create** menu.

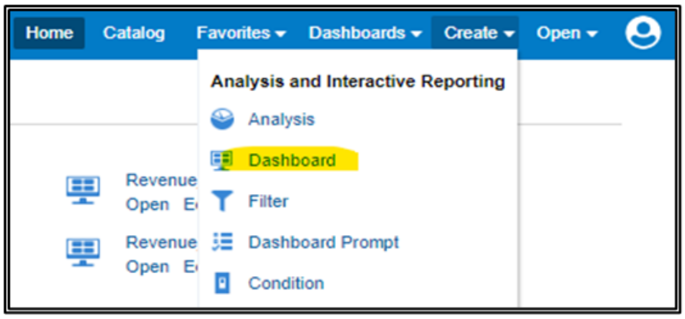

Figure 11: Selecting Dashboard

12. Choose a name and location for the new dashboard.

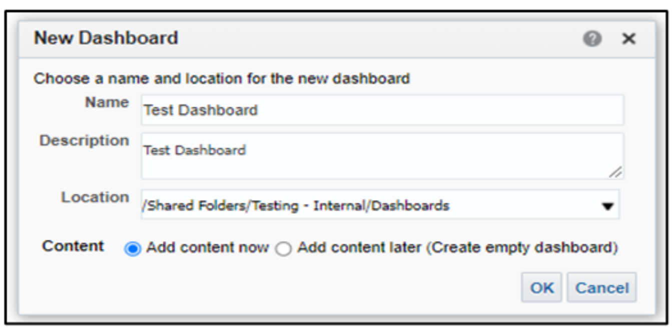

Figure 12: New Dashboard Window

13. Arrange the created Dashboard prompt and Analysis by adding sections under column within the layout of the dashboard and save the dashboard page and dashboard with relevant names.

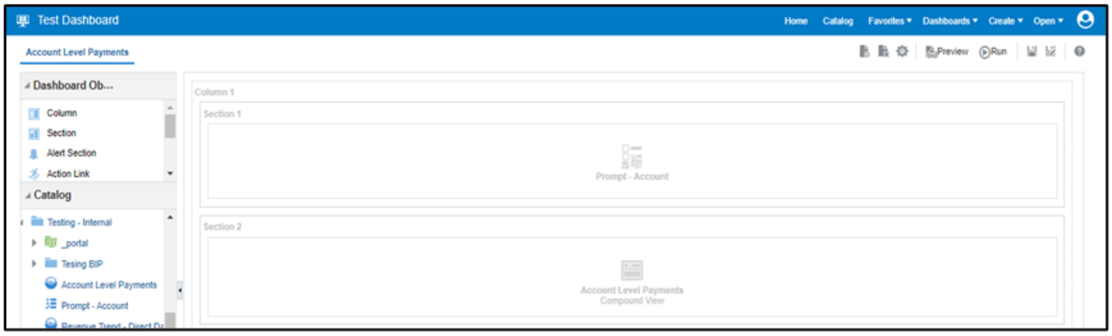

Figure 13: Dashboard Alignment

14. Select the **Created Dashboard** option from the **Dashboards** menu.

Note: The **Created Dashboard** option can be viewed by users who have read access.

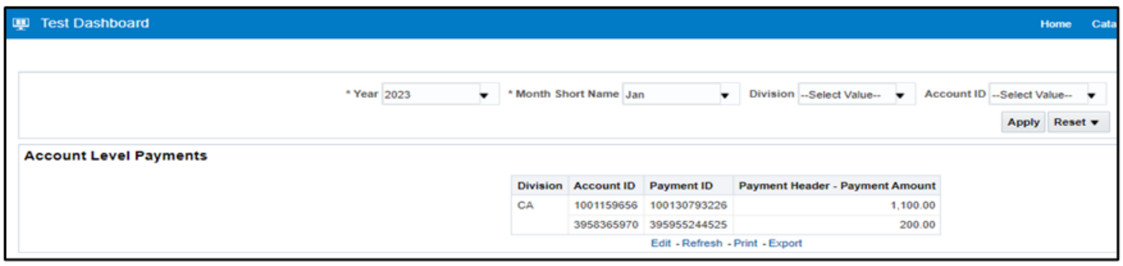

Figure 14: Dashboard Access

7. Subject Areas

The subject areas of OAS RPD enable to show different views of a business model to different sets of users. Dashboard reports or Data Visualization workbooks can be created based on these subject areas.

7.1 Adjustment

Adjustment subject area provides a summary of all Adjustment transactions. Some of the key questions that can be answered are:

- The Customers/Contract Types that have witnessed large adjustments
- Adjustments amount trend over the last 12 months or that show any unusual spike over a period
- Variation from Last Month Percentage variation of adjustment amount from the previous month
- Top N or Breakdown of Adjustment amount across various Adjustment types

Below are the entities that are part of Adjustment subject area:

Subject Area	Presentation Table	Physical Table
Adjustment	Account	CI_ACCT
Adjustment	Account Characteristics	CI_ACCT_CHAR
Adjustment	Account Numbers	CI_ACCT_NBR
Adjustment	Account Numbers	CI_ACCT_NBR_TYPE_L
Adjustment	Account Person Relationship	CI_ACCT_PER
Adjustment	Account Person Routing	CI_ACCT_PER_ROUTING
Adjustment	Adjustment A/P Check Request	CI_ADJ_APREQ
Adjustment	Adjustment Cancel Reason Language	CI_ADJ_CAN_RSN_L
Adjustment	Adjustment Characteristic	CI_ADJ_CHAR
Adjustment	Adjustment Date	CI_DATE
Adjustment	Adjustment Details	CI_ADJ
Adjustment	Adjustment Details	CI_CURRENCY_CD
Adjustment	Adjustment Type	CI_ADJ_TYPE
Adjustment	Adjustment Type Language	CI_ADJ_TYPE_L
Adjustment	CIS Division	CI_CIS_DIVISION
Adjustment	CIS Division Language	CI_CIS_DIVISION_L
Adjustment	Dispute Request	C1_DSPT_REQ
Adjustment	Dispute Request Characteristic	C1_DSPT_REQ_CHAR
Adjustment	Dispute Request Details	C1_DSPT_REQ_DTLS_ADJ
Adjustment	Dispute Request Details	C1_DSPT_REQ_DTLS

Subject Area	Presentation Table	Physical Table
Adjustment	Dispute Request Log	C1_DSPT_REQ_LOG
Adjustment	Dispute Request Log Message Parameter	C1_DSPT_REQ_LOG_PARM
Adjustment	Dispute Request Type	C1_DSPT_REQ_TYPE
Adjustment	Dispute Request Type Characteristics	C1_DSPT_REQ_TYPE_CHAR
Adjustment	Dispute Request Type Language	C1_DSPT_REQ_TYPE_L
Adjustment	Employment Details	CI_PER_EMPLOYMENT_DTLS
Adjustment	Financial Transaction - Adjustment	CI_FT
Adjustment	Financial Transaction - Contract	CI_FT
Adjustment	Financial Transaction General Ledger - Adjustment	CI_FT_GL
Adjustment	Financial Transaction General Ledger - Contract	CI_FT_GL
Adjustment	Parent Person	CI_PER
Adjustment	Parent Person Name	CI_PER_NAME
Adjustment	Person	CI_PER
Adjustment	Person Address	CI_PER_ADDR
Adjustment	Person Address Override	CI_PER_ADDR_OVRD
Adjustment	Person Characteristics	CI_PER_CHAR
Adjustment	Person Identifier	CI_PER_ID
Adjustment	Person Identifier	CI_ID_TYPE_L
Adjustment	Person Key	CI_PER_K
Adjustment	Person Name	CI_PER_NAME
Adjustment	Person Phone	CI_PER_PHONE
Adjustment	Person Relationship Type	CI_PER_REL_TYPE
Adjustment	Person Relationship Type Language	CI_PER_REL_TYPE_L
Adjustment	Person Seasonal Address	CI_PER_ADDR_SEAS
Adjustment	Person to Person	CI_PER_PER
Adjustment	Person to Person Characteristics	CI_PER_PER_CHAR
Adjustment	Refund/Write Off Request	C1_REF_WO_REQ
Adjustment	Refund/Write Off Request Characteristics	C1_REF_WO_REQ_CHAR
Adjustment	Refund/Write Off Request Details	C1_REF_WO_REQ_DTLS
Adjustment	Refund/Write Off Request Log	C1_REF_WO_REQ_LOG
Adjustment	Refund/Write Off Request Log Parameters	C1_REF_WO_REQ_LOG_PARM

Subject Area	Presentation Table	Physical Table
Adjustment	Refund/Write Off Request Type	C1_REF_WO_REQ_TYPE
Adjustment	Refund/Write Off Request Type Characteristic	C1_REF_WO_REQ_TYPE_CHAR
Adjustment	Refund/Write Off Request Type Language	C1_REF_WO_REQ_TYPE_L
Adjustment	SA (Service Agreement)	CI_SA
Adjustment	Fact - Adjustment	CI_ADJ
Adjustment	Fact - Adjustment Type	CI_ADJ_TYPE
Adjustment	Fact - Dispute Request Details	C1_DSPT_REQ_DTLS
Adjustment	Fact - Financial Transaction - Adjustment	CI_FT
Adjustment	Fact - Financial Transaction - Contract	CI_FT
Adjustment	Fact - Financial Transaction General Ledger	CI_FT_GL
Adjustment	Fact - Financial Transaction General Ledger - Contract	CI_FT_GL
Adjustment	Fact - Refund/Write Off Request	C1_REF_WO_REQ
Adjustment	Fact - Refund/Write Off Request Details	C1_REF_WO_REQ_DTLS

7.2 Billing

Billing subject area provides an overview of Revenue. Some of the key questions that can be answered are:

- Revenue trend over the last 12 months or any selected period
- Average Revenue per Customer/Account/Division
- Helps to validate Trial Bills v/s Actual Bills
- Top N Customers by Revenue, Top N Products by Revenue

Below are the entities that are part of Billing subject area:

Subject Area	Presentation Table	Physical Table
Billing	Account	CI_ACCT
Billing	Account Automatic Payment	CI_ACCT_APAY
Billing	Account Characteristics	CI_ACCT_CHAR
Billing	Account Numbers	CI_ACCT_NBR
Billing	Account Numbers	CI_ACCT_NBR_TYPE_L
Billing	Account Person Relationship	CI_ACCT_PER
Billing	Account Person Routing	CI_ACCT_PER_ROUTING

Subject Area	Presentation Table	Physical Table
Billing	Bill Calc Line	CI_BSEG_CALC_LN
Billing	Bill Calc Line	CI_DST_CODE_L
Billing	Bill Calc Line Characteristic	CI_BSEG_CL_CHAR
Billing	Bill Cycle	CI_BILL_CYC
Billing	Bill Cycle	CI_BILL_CYC_L
Billing	Bill Cycle Schedule	CI_BILL_CYC_SCH
Billing	Bill Date	CI_DATE
Billing	Bill Details View	C1_BILL_DTLS_VW
Billing	Bill Header	CI_BILL
Billing	Bill Routing	CI_BILL_ROUTING
Billing	Bill Routing	CI_BILL_RT_TYPE
Billing	Bill Segment	CI_BSEG
Billing	Bill Segment Calc Header	CI_BSEG_CALC
Billing	Bill Segment Extension	CI_BSEG_EXT
Billing	Bill Segment Service Quantity	CI_BSEG_SQ
Billing	Billable Charge	CI_BILL_CHG
Billing	Billable Charge Characteristics	CI_BILL_CHG_CHAR
Billing	Billable Charge Line	CI_B_CHG_LINE
Billing	Billable Charge SQ	CI_BCHG_SQ
Billing	CIS Division	CI_CIS_DIVISION
Billing	CIS Division Language	CI_CIS_DIVISION_L
Billing	Currency Code Language	CI_CURRENCY_CD_L
Billing	Data Access Role Language	CI_DAR_L
Billing	Data Access User	CI_DAR_USR
Billing	Dispute Request	C1_DSPT_REQ
Billing	Dispute Request Characteristic	C1_DSPT_REQ_CHAR
Billing	Dispute Request Details	C1_DSPT_REQ_DTLS_ADJ
Billing	Dispute Request Details	C1_DSPT_REQ_DTLS
Billing	Dispute Request Log	C1_DSPT_REQ_LOG
Billing	Dispute Request Log Message Parameter	C1_DSPT_REQ_LOG_PARM
Billing	Dispute Request Type	C1_DSPT_REQ_TYPE

Subject Area	Presentation Table	Physical Table
Billing	Dispute Request Type Characteristics	C1_DSPT_REQ_TYPE_CHAR
Billing	Dispute Request Type Language	C1_DSPT_REQ_TYPE_L
Billing	Distribution Code GL Account Characteristics	CI_DST_CD_CHAR
Billing	Division Priceitem Hierarchy	C1_DIV_PRICEITEM_HIERARCHY
Billing	Employment Details	CI_PER_EMPLOYMENT_DTLS
Billing	Exchange Rate	CI_EXCHRATE
Billing	Extendable Lookup	F1_EXT_LOOKUP_VAL
Billing	Extendable Lookup	F1_EXT_LOOKUP_VAL_L
Billing	Financial Transaction - Bill	CI_FT
Billing	Financial Transaction - Bill Segment	CI_FT
Billing	Financial Transaction - Contract	CI_FT
Billing	Financial Transaction General Ledger - Bill	CI_FT_GL
Billing	Financial Transaction General Ledger - Bill Segment	CI_FT_GL
Billing	Financial Transaction General Ledger - Contract	CI_FT_GL
Billing	Hold Request - Account	C1_HOLD_REQ
Billing	Hold Request - Bill	C1_HOLD_REQ
Billing	Hold Request - Person	C1_HOLD_REQ
Billing	Hold Request Characteristics - Account	C1_HOLD_REQ_CHAR
Billing	Hold Request Details - Account	C1_HOLD_REQ_DTLS
Billing	Hold Request Details - Bill	C1_HOLD_REQ_DTLS
Billing	Hold Request Details - Person	C1_HOLD_REQ_DTLS
Billing	Hold Request Key - Account	C1_HOLD_REQ_K
Billing	Hold Request Log - Account	C1_HOLD_REQ_LOG
Billing	Hold Request Log Message Parameter - Account	C1_HOLD_REQ_LOG_PARM
Billing	Hold Request Process - Account	C1_HOLD_REQ_PROC
Billing	Hold Request Type - Account	C1_HOLD_REQ_TYPE
Billing	Hold Request Type Characteristics - Account	C1_HOLD_REQ_TYPE_CHAR
Billing	Hold Request Type Language - Account	C1_HOLD_REQ_TYPE_L
Billing	Hold Request Type Processes - Account	C1_HOLD_REQ_TYPE_PROC
Billing	Message	CI_MSG

Subject Area	Presentation Table	Physical Table
Billing	Message Language	CI_MSG_L
Billing	Parent Person	CI_PER
Billing	Parent Person Name	CI_PER_NAME
Billing	Person	CI_PER
Billing	Person Address	CI_PER_ADDR
Billing	Person Address Override	CI_PER_ADDR_OVRD
Billing	Person Characteristics	CI_PER_CHAR
Billing	Person Identifier	CI_PER_ID
Billing	Person Identifier	CI_ID_TYPE_L
Billing	Person Key	CI_PER_K
Billing	Person Name	CI_PER_NAME
Billing	Person Phone	CI_PER_PHONE
Billing	Person Relationship Type	CI_PER_REL_TYPE
Billing	Person Relationship Type Language	CI_PER_REL_TYPE_L
Billing	Person Seasonal Address	CI_PER_ADDR_SEAS
Billing	Person to Person	CI_PER_PER
Billing	Person to Person Characteristics	CI_PER_PER_CHAR
Billing	Price Assignment	CI_PRICEASGN
Billing	Price Assignment Cost Details	C1_PRICEASGN_COST
Billing	Price Assignment Negotiability Ceil and Floor	C1_PRICEASGN_NEG_FLR_CL
Billing	Price Assignment Product Parameters	CI_PRICEASGN_PARM
Billing	Price Assignment Product Parameters	CI_PRICE_PARM_L
Billing	Price Assignment SQI	C1_PRICEASGN_SQ
Billing	Price Item Characteristics	CI_PRICEITEM_CHAR
Billing	Price Item Language	CI_PRICEITEM_L
Billing	Price Item Negotiability Ceil Floor	C1_PRICEITEM_NEG_FLR_CL
Billing	Price Item Parameter Values	C1_PRICEITEM_PARM_VAL
Billing	Price List	CI_PRICELIST
Billing	Price List Assignment	CI_PRICELIST_ASGN
Billing	Price List Characteristic	CI_PRICELIST_CHAR
Billing	Price List Division	CI_DIV_PRICELIST

Subject Area	Presentation Table	Physical Table
Billing	Price List Language	CI_PRICELIST_L
Billing	Price List Relation	CI_PRICELIST_REL
Billing	Pricing Item	CI_PRICEITEM
Billing	SA (Service Agreement)	CI_SA
Billing	Trial Bill Calc Line	CI_TRL_BSCALC_LN
Billing	Trial Bill Calc Line Characteristic	CI_TRL_BSCL_CHAR
Billing	Trial Bill Characteristic	CI_TRL_BILL_CHAR
Billing	Trial Bill Date	CI_DATE
Billing	Trial Bill Exception	CI_TRL_BILL_EXCP
Billing	Trial Bill Header	CI_TRL_BILL
Billing	Trial Bill Header Key	CI_TRL_BILL_K
Billing	Trial Bill Log	CI_TRL_BILL_LOG
Billing	Trial Bill Message	CI_TRL_BILL_MSGS
Billing	Trial Bill Message Parameters	CI_TRL_BILL_MSG_PRM
Billing	Trial Bill Routings	CI_TRL_BILL_ROUTING
Billing	Trial Bill Segment	CI_TRL_BSEG
Billing	Trial Bill Segment Calc Header	CI_TRL_BSCALC
Billing	Trial Bill Segment Exception	CI_TRL_BSEXCP
Billing	Trial Bill Segment Extension	CI_TRL_BSEXT
Billing	Trial Bill Segment Item	CI_TRL_BSITEM
Billing	Trial Bill Segment Key	CI_TRL_BSEG_K
Billing	Trial Bill Segment Messages	CI_TRL_BSMSG
Billing	Trial Bill Segment Register Read	CI_TRL_BSREAD
Billing	Trial Bill Segment Service Quantity	CI_TRL_BSSQ
Billing	Trial Bill/Contract Balance Snapshot	CI_TRL_BILL_SA
Billing	Trial Financial Transaction	CI_TRL_FT
Billing	Trial Financial Transaction General Ledger	CI_TRL_FT_GL
Billing	Trial Financial Transaction Key	CI_TRL_FT_K
Billing	Trial FT Process	CI_TRL_FT_PROC
Billing	User	SC_USER
Billing	User Group Language	SC_USER_GROUP_L

Subject Area	Presentation Table	Physical Table
Billing	User Group User	SC_USR_GRP_USR
Billing	Fact - Adjustment A/P Check Request	CI_ADJ_APREQ
Billing	Fact - Bill Calc Line	CI_BSEG_CALC_LN
Billing	Fact - Bill Details View	C1_BILL_DTLS_VW
Billing	Fact - Bill Header	CI_BILL
Billing	Fact - Bill Segment Calc Header	CI_BSEG_CALC
Billing	Fact - Bill Segment Calc Header	CI_EXCHRATE
Billing	Fact - Billable Charge Line	CI_B_CHG_LINE
Billing	Fact - Dispute Request Details	C1_DSPT_REQ_DTLS
Billing	Fact - Financial Transaction - Bill	CI_FT
Billing	Fact - Financial Transaction - Bill Segment	CI_FT
Billing	Fact - Financial Transaction - Contract	CI_FT
Billing	Fact - Financial Transaction General Ledger - Bill	CI_FT_GL
Billing	Fact - Financial Transaction General Ledger - Bill Segment	CI_FT_GL
Billing	Fact - Financial Transaction General Ledger - Contract	CI_FT_GL
Billing	Fact - Hold Request Details - Account	C1_HOLD_REQ_DTLS
Billing	Fact - Hold Request Details - Account	C1_HOLD_REQ
Billing	Fact - Hold Request Details - Bill	C1_HOLD_REQ
Billing	Fact - Hold Request Details - Bill	C1_HOLD_REQ_DTLS
Billing	Fact - Hold Request Details - Person	C1_HOLD_REQ
Billing	Fact - Hold Request Details - Person	C1_HOLD_REQ_DTLS
Billing	Fact - Refund/Write Off Request	C1_REF_WO_REQ
Billing	Fact - Refund/Write Off Request Details	C1_REF_WO_REQ_DTLS
Billing	Fact - Trial Bill Calc Line	CI_TRL_BSCALC_LN
Billing	Fact - Trial Bill Header	CI_TRL_BILL
Billing	Fact - Trial Bill Segment Calc Header	CI_TRL_BSCALC
Billing	Fact - Trial Bill Segment Item	CI_TRL_BSITEM
Billing	Fact - Trial Bill Segment Register Read	CI_TRL_BSREAD
Billing	Fact - Trial Bill/Contract Balance Snapshot	CI_TRL_BILL_SA
Billing	Fact - Trial Financial Transaction	CI_TRL_FT

Subject Area	Presentation Table	Physical Table
Billing	Fact - Trial Financial Transaction General Ledger	CI_TRL_FT_GL

7.3 Deal Model

Deal Model subject area provides an overview of the Deal Management. It will give an insight about the different stages of Deal Management life cycle like Prospect Person creation, Deal Creation, Deal Simulation, Deal Mapping, Deal Access, Deal Approval etc. Below are the entities that are part of Deal Model subject area:

Subject Area	Presentation Table	Physical Table
Deal Model	Access Group by User View	CI_USR_ACC_GRP_VW
Deal Model	Account	CI_ACCT
Deal Model	Account Characteristics	CI_ACCT_CHAR
Deal Model	Account Numbers	CI_ACCT_NBR
Deal Model	Account Numbers	CI_ACCT_NBR_TYPE_L
Deal Model	Account Person Relationship	CI_ACCT_PER
Deal Model	Account Person Routing	CI_ACCT_PER_ROUTING
Deal Model	Comments on Model	C1_MODEL_COMMENTS
Deal Model	Deal	C1_DEAL
Deal Model	Deal	CI_LOOKUP_VAL_L
Deal Model	Deal Adhoc Cost/Revenue	C1_DEAL_ADHOC_REV
Deal Model	Deal Adhoc Terms and Conditions	C1_DEAL_TC_ADHOC
Deal Model	Deal Adhoc Terms and Conditions Language	C1_DEAL_TC_ADHOC_L
Deal Model	Deal Approval	C1_DEAL_APPROVAL
Deal Model	Deal Approval Hierarchy	C1_DEAL_APROF_HCY
Deal Model	Deal Approval Profile	C1_DEAL_APROF
Deal Model	Deal Approval Profile Language	C1_DEAL_APROF_L
Deal Model	Deal Characteristic	C1_DEAL_CHAR
Deal Model	Deal Comments	C1_DEAL_COMMENTS
Deal Model	Deal Date	CI_DATE
Deal Model	Deal Defer Request	C1_DEAL_DEFER_REQ
Deal Model	Deal Event	C1_DEAL_K
Deal Model	Deal Language	C1_DEAL_L
Deal Model	Deal Log Parameters	C1_DEAL_LOG_PARM

Subject Area	Presentation Table	Physical Table
Deal Model	Deal Logs	C1_DEAL_LOG
Deal Model	Deal Mapping Char	C1_DEAL_MAPPINGS_CHAR
Deal Model	Deal Mapping K	C1_DEAL_MAPPINGS_K
Deal Model	Deal Mapping L	C1_DEAL_MAPPINGS_L
Deal Model	Deal Model Recommended Price	C1_MODEL_RECM_PRICEASGN
Deal Model	Deal Model SQI	C1_MODEL_SQI
Deal Model	Deal Price Assign Terms and Conditions	C1_DEAL_PRICE_ASGN_TC
Deal Model	Deal Price assign Terms Conditions Language	C1_DEAL_PRICE_ASGN_TC_L
Deal Model	Deal Price item Approval	C1_DEAL_PRICEITEM_APPR
Deal Model	Deal Price Item Comments	C1_DEAL_PRICEITEM_COMMENTS
Deal Model	Deal Product	C1_DEAL_PRODUCT
Deal Model	Deal References	C1_DEAL_REFERENCES
Deal Model	Deal Simulation	C1_DEAL_SIMULATION_DTL
Deal Model	Deal Simulation Smry	C1_DEAL_SIMULATION_SMRY
Deal Model	Deal Standard Mapping	C1_DEAL_MAPPINGS
Deal Model	Deal Template	C1_DEAL_TEMPLATE
Deal Model	Deal Template Details	C1_DEAL_TEMPLATE_DTL
Deal Model	Deal Template Language	C1_DEAL_TEMPLATE_L
Deal Model	Deal Terms and Conditions	C1_DEAL_TC
Deal Model	Deal Type	C1_DEAL_TYPE
Deal Model	Deal Type Algorithm	C1_DEAL_TYPE_ALG
Deal Model	Deal Type Approval Hiera Characteristics	C1_DEAL_TYPE_CST_AHCY_CHAR
Deal Model	Deal Type Characteristics	C1_DEAL_TYPE_CHAR
Deal Model	Deal Type Customer Approval Hierarchy	C1_DEAL_TYPE_CST_AHCY
Deal Model	Deal Type Schema For Language	C1_DEAL_TYPE_L
Deal Model	Employment Details	CI_PER_EMPLOYMENT_DTLS
Deal Model	Mapping Standard Pricelist	C1_DEAL_PRICELIST
Deal Model	Model	C1_MODEL
Deal Model	Model	CI_LOOKUP_VAL_L
Deal Model	Model Charge Line	C1_MODEL_CHG_LINE
Deal Model	Model Charge Line Date	CI_DATE

Subject Area	Presentation Table	Physical Table
Deal Model	Model Entity Default Details	C1_MODEL_ENTITY_DEFAULT_DTLS
Deal Model	Model Financial Summary	C1_MODEL_FIN_SUMMARY
Deal Model	Model Key	C1_MODEL_K
Deal Model	Model Language	C1_MODEL_L
Deal Model	Model Log Parm	C1_MODEL_LOG_PARM
Deal Model	Model Logs	C1_MODEL_LOG
Deal Model	Model Price Item	C1_MODEL_PRICEITEM
Deal Model	Person	CI_PER
Deal Model	Person Address	CI_PER_ADDR
Deal Model	Person Address Override	CI_PER_ADDR_OVRD
Deal Model	Person Characteristics	CI_PER_CHAR
Deal Model	Person Identifier	CI_PER_ID
Deal Model	Person Identifier	CI_ID_TYPE_L
Deal Model	Person Key	CI_PER_K
Deal Model	Person Name	CI_PER_NAME
Deal Model	Person Phone	CI_PER_PHONE
Deal Model	Person Relationship Type	CI_PER_REL_TYPE
Deal Model	Person Relationship Type Language	CI_PER_REL_TYPE_L
Deal Model	Person Seasonal Address	CI_PER_ADDR_SEAS
Deal Model	Person to Person	CI_PER_PER
Deal Model	Person to Person Characteristics	CI_PER_PER_CHAR
Deal Model	Prospect Account	C1_PRS_ACCT
Deal Model	Prospect Account Characteristics	C1_PRS_ACCT_CHAR
Deal Model	Prospect Account Number	C1_PRS_ACCT_NBR
Deal Model	Prospect Account Person Relationship	C1_PRS_ACCT_PER
Deal Model	Prospect Person	C1_PRS_PER
Deal Model	Prospect Person Characteristics	C1_PRS_PER_CHAR
Deal Model	Prospect Person Identifier	C1_PRS_PER_ID
Deal Model	Prospect Person Key	C1_PRS_PER_K
Deal Model	Prospect Person Name	C1_PRS_PER_NAME
Deal Model	Prospect Person Phone	C1_PRS_PER_PHONE

Subject Area	Presentation Table	Physical Table
Deal Model	Prospect Person to Person	C1_PRS_PER_PER
Deal Model	Prospect Person to Person Char	C1_PRS_PER_PER_CHAR
Deal Model	Fact - Deal	C1_DEAL
Deal Model	Fact - Deal Adhoc Cost/Revenue	C1_DEAL_ADHOC_REV
Deal Model	Fact - Deal Approval Hierarchy	C1_DEAL_APROF_HCY
Deal Model	Fact - Deal Simulation Summary	C1_DEAL_SIMULATION_SMRY
Deal Model	Fact - Deal Simulation Table	C1_DEAL_SIMULATION_DTL
Deal Model	Fact - Model Charge Line Table	C1_MODEL_CHG_LINE
Deal Model	Fact - Model Financial Summary	C1_MODEL_FIN_SUMMARY

7.4 Payment

Payment subject area provides a summary of all payment transactions. Some of the key questions that can be answered are:

- Total Payments over a period or trend for the last 12 months
- Payment details including Payer accounts, Tender types, and source
- Preferred tender type and tender source for the customer to potentially enable an effective offer management strategy

Below are entities that are part of Payments subject area:

Subject Area	Presentation Table	Physical Table
Payment	Account	CI_ACCT
Payment	Account Auto Payment Characteristics	CI_ACCT_APAY_CHAR
Payment	Account Automatic Payment	CI_ACCT_APAY
Payment	Account Characteristics	CI_ACCT_CHAR
Payment	Account Numbers	CI_ACCT_NBR
Payment	Account Numbers	CI_ACCT_NBR_TYPE_L
Payment	Account Person Relationship	CI_ACCT_PER
Payment	Account Person Routing	CI_ACCT_PER_ROUTING
Payment	Auto Pay Clearing Staging	CI_APAY_CLR_STG
Payment	Automatic Payment Rule	C1_APAY_RULE_CRITERIA
Payment	Automatic Payment Rule	C1_APAY_RULE
Payment	CIS Division	CI_CIS_DIVISION
Payment	CIS Division Language	CI_CIS_DIVISION_L

Subject Area	Presentation Table	Physical Table
Payment	Dispute Request	C1_DSPT_REQ
Payment	Dispute Request Characteristic	C1_DSPT_REQ_CHAR
Payment	Dispute Request Details	C1_DSPT_REQ_DTLS_ADJ
Payment	Dispute Request Details	C1_DSPT_REQ_DTLS
Payment	Dispute Request Log	C1_DSPT_REQ_LOG
Payment	Dispute Request Log Message Parameter	C1_DSPT_REQ_LOG_PARM
Payment	Dispute Request Type	C1_DSPT_REQ_TYPE
Payment	Dispute Request Type Characteristics	C1_DSPT_REQ_TYPE_CHAR
Payment	Dispute Request Type Language	C1_DSPT_REQ_TYPE_L
Payment	Employment Details	CI_PER_EMPLOYMENT_DTLS
Payment	Extendable Lookup	F1_EXT_LOOKUP_VAL
Payment	Extendable Lookup	F1_EXT_LOOKUP_VAL_L
Payment	Financial Transaction - Contract	CI_FT
Payment	Financial Transaction - Pay Segment	CI_FT
Payment	Financial Transaction - Payment	CI_FT
Payment	Financial Transaction - Payment	CI_MATCH_EVT
Payment	Financial Transaction General Ledger - Contract	CI_FT_GL
Payment	Financial Transaction General Ledger - Pay Segment	CI_FT_GL
Payment	Financial Transaction General Ledger - Payment	CI_FT_GL
Payment	Parent Person	CI_PER
Payment	Parent Person Name	CI_PER_NAME
Payment	Payment Agreement Request	C1_PA_REQ
Payment	Payment Agreement Request Characteristics	C1_PA_REQ_CHAR
Payment	Payment Agreement Request Details	C1_PA_REQ_DTLS
Payment	Payment Agreement Request Log	C1_PA_REQ_LOG
Payment	Payment Agreement Request Log Parameters	C1_PA_REQ_LOG_PARM
Payment	Payment Agreement Request Schedule	C1_PA_REQ_SCHED
Payment	Payment Agreement Request Type	C1_PA_REQ_TYPE
Payment	Payment Agreement Request Type Characteristic	C1_PA_REQ_TYPE_CHAR
Payment	Payment Agreement Request Type Language	C1_PA_REQ_TYPE_L
Payment	Payment Characteristic	CI_PAY_CHAR

Subject Area	Presentation Table	Physical Table
Payment	Payment Details	C1_PAY_DETAILS
Payment	Payment Distribution	C1_PAY_DISTRIBUTION
Payment	Payment Event	CI_PAY_EVENT
Payment	Payment Event Date	CI_DATE
Payment	Payment Event Distribution Detail	CI_PEVT_DST_DTL
Payment	Payment Event Exception	CI_PAY_EVT_EXCP
Payment	Payment Exception	CI_PAY_EXCP
Payment	Payment Header	CI_PAY
Payment	Payment Match Type	C1_PAY_MATCH_TYPE
Payment	Payment Request	C1_PAY_REQ
Payment	Payment Request Log	C1_PAY_REQ_LOG
Payment	Payment Request Log Message Parameter	C1_PAY_REQ_LOG_PARM
Payment	Payment Request Type	C1_PAY_REQUEST_TYPE
Payment	Payment Request Type Characteristics	C1_PAY_REQUEST_TYPE_CHA R
Payment	Payment Request Type Language	C1_PAY_REQUEST_TYPE_L
Payment	Payment Segment	CI_PAY_SEG
Payment	Payment Staging	CI_PAY_ST
Payment	Payment Tender	CI_PAY_TNDR
Payment	Payment Tender Characteristics	CI_PAY_TNDR_CHAR
Payment	Payment Tender Request	C1_PAY_TNDR_REQ
Payment	Payment Tender Request	C1_PAY_TNDR_CHAR_REQ
Payment	Payment Tender Staging	CI_PAY_TNDR_ST
Payment	Payment Upload Error Pre-staging	CI_UPLPAY_STG_ERR
Payment	Payment Upload Header Pre-staging	CI_UPLPAY_HSTG
Payment	Payment Upload Log	C1_UPLPAY_LOG
Payment	Payment Upload Pre-staging	CI_UPLPAY_STG
Payment	Payment Upload Pre-staging Characteristics	CI_UPLPAY_STG_CHAR
Payment	Person	CI_PER
Payment	Person Address	CI_PER_ADDR
Payment	Person Address Override	CI_PER_ADDR_OVRD

Subject Area	Presentation Table	Physical Table
Payment	Person Characteristics	CI_PER_CHAR
Payment	Person Identifier	CI_PER_ID
Payment	Person Identifier	CI_ID_TYPE_L
Payment	Person Key	CI_PER_K
Payment	Person Name	CI_PER_NAME
Payment	Person Phone	CI_PER_PHONE
Payment	Person Relationship Type	CI_PER_REL_TYPE
Payment	Person Relationship Type Language	CI_PER_REL_TYPE_L
Payment	Person Seasonal Address	CI_PER_ADDR_SEAS
Payment	Person to Person	CI_PER_PER
Payment	Person to Person Characteristics	CI_PER_PER_CHAR
Payment	SA (Service Agreement)	CI_SA
Payment	Tender Control	CI_TNDR_CTL
Payment	Tender Control	CI_TNDR_SRCE
Payment	Tender Control	CI_TNDR_SRCE_L
Payment	Tender Type	CI_TENDER_TYPE
Payment	Tender Type	CI_TENDER_TYPE_L
Payment	Tender Type Language	CI_TENDER_TYPE_L
Payment	Fact - Account Automatic Payment	CI_ACCT_APAY
Payment	Fact - Adjustment A/P Check Request	CI_ADJ_APREQ
Payment	Fact - Dispute Request Details	C1_DSPT_REQ_DTLS
Payment	Fact - Financial Transaction - Contract	CI_FT
Payment	Fact - Financial Transaction - Pay	CI_FT
Payment	Fact - Financial Transaction - Pay Segment	CI_FT
Payment	Fact - Financial Transaction General Ledger - Contract	CI_FT_GL
Payment	Fact - Financial Transaction General Ledger - Pay	CI_FT_GL
Payment	Fact - Financial Transaction General Ledger - Pay Segment	CI_FT_GL
Payment	Fact - Payment Agreement Request Schedule	C1_PA_REQ_SCHED
Payment	Fact - Payment Distribution	C1_PAY_DISTRIBUTION
Payment	Fact - Payment Event Distribution Detail	CI_PEVT_DST_DTL

Subject Area	Presentation Table	Physical Table
Payment	Fact - Payment Header	CI_PAY
Payment	Fact - Payment Segment	CI_PAY_SEG
Payment	Fact - Payment Staging	CI_PAY_ST
Payment	Fact - Payment Tender	CI_PAY_TNDR
Payment	Fact - Payment Tender Request	C1_PAY_TNDR_REQ
Payment	Fact - Payment Tender Staging	CI_PAY_TNDR_ST
Payment	Fact - Payment Upload Pre-staging	CI_UPLPAY_STG
Payment	Fact - Refund/Write Off Request	C1_REF_WO_REQ
Payment	Fact - Refund/Write Off Request Details	C1_REF_WO_REQ_DTLS
Payment	Fact - Tender Control	CI_TNDR_CTL
Payment	Fact - Tender Source	CI_TNDR_SRCE

7.5 To Do

To Do subject area provides an insight about the To-Do tasks. Some of the key questions that can be answered are:

- To-Do tasks that have a consistently high % of Pending status over a period
- To-Do Tasks by Created/Pending/Completed
- To-Do tasks require more effort

Below are entities that are part of To Do subject area:

Subject Area	Presentation Table	Physical Table
To Do	Lookup Field Value Language - Priority	CI_LOOKUP_VAL_L
To Do	Lookup Field Value Language - Status	CI_LOOKUP_VAL_L
To Do	Role Language	CI_ROLE_L
To Do	Role User	CI_ROLE_USER
To Do	To Do Date	CI_DATE
To Do	To Do Entry	CI_TD_ENTRY
To Do	To Do Entry Transaction History	CI_TD_LOG
To Do	To Do Type	CI_TD_TYPE
To Do	To Do Type Language	CI_TD_TYPE_L
To Do	To Do Type Role	CI_TD_VAL_ROLE
To Do	User	SC_USER
To Do	User - Assigned	SC_USER

Subject Area	Presentation Table	Physical Table
To Do	Fact - To Do Entry	CI_TD_ENTRY

7.6 Transaction

Transaction subject area provides an overview of Transaction Feed Management. Some of the key questions that can be answered are:

- Percentage variation of Transaction Amount or Transaction Volume from the previous month or for last 12 months
- Top N products based on Transaction Amount or Transaction Volume

Below are entities that are part of Transaction subject area:

Subject Area	Presentation Table	Physical Table
Transaction	Account	CI_ACCT
Transaction	Account Characteristics	CI_ACCT_CHAR
Transaction	Account Numbers	CI_ACCT_NBR
Transaction	Account Numbers	CI_ACCT_NBR_TYPE_L
Transaction	Account Person Relationship	CI_ACCT_PER
Transaction	Account Person Routing	CI_ACCT_PER_ROUTING
Transaction	CIS Division	CI_CIS_DIVISION
Transaction	CIS Division Language	CI_CIS_DIVISION_L
Transaction	Employment Details	CI_PER_EMPLOYMENT_DTLS
Transaction	Message	CI_MSG
Transaction	Message Language	CI_MSG_L
Transaction	Parent Person	CI_PER
Transaction	Parent Person Name	CI_PER_NAME
Transaction	Person	CI_PER
Transaction	Person Address	CI_PER_ADDR
Transaction	Person Address Override	CI_PER_ADDR_OVRD
Transaction	Person Characteristics	CI_PER_CHAR
Transaction	Person Identifier	CI_PER_ID
Transaction	Person Identifier	CI_ID_TYPE_L
Transaction	Person Key	CI_PER_K
Transaction	Person Name	CI_PER_NAME
Transaction	Person Phone	CI_PER_PHONE

Subject Area	Presentation Table	Physical Table
Transaction	Person Relationship Type	CI_PER_REL_TYPE
Transaction	Person Relationship Type Language	CI_PER_REL_TYPE_L
Transaction	Person Seasonal Address	CI_PER_ADDR_SEAS
Transaction	Person to Person	CI_PER_PER
Transaction	Person to Person Characteristics	CI_PER_PER_CHAR
Transaction	SA (Service Agreement)	CI_SA
Transaction	Transaction Date	CI_DATE
Transaction	Transaction Detail	CI_TXN_DETAIL
Transaction	Transaction Detail Price Item	CI_TXN_DTL_PRITM
Transaction	Transaction Header	CI_TXN_HEADER
Transaction	Transaction Record Type	CI_TXN_REC_TYPE
Transaction	Transaction Record Type Language	CI_TXN_REC_TYPE_L
Transaction	Transaction Source	CI_TXN_SOURCE
Transaction	Transaction Source Language	CI_TXN_SOURCE_L
Transaction	Fact - Transaction Detail	CI_TXN_DETAIL
Transaction	Fact - Transaction Detail Price Item	CI_TXN_DTL_PRITM
Transaction	Fact - Transaction Header	CI_TXN_HEADER

7.7 User Access

User Access subject area provides an overview of Users, User Groups and Data Access Roles. Below are entities that are part of User Access subject area:

Subject Area	Presentation Table	Physical Table
User Access	Data Access Role Language	CI_DAR_L
User Access	Data Access User	CI_DAR_USR
User Access	Role Language	CI_ROLE_L
User Access	Role User	CI_ROLE_USER
User Access	User	SC_USER
User Access	User Group Language	SC_USER_GROUP_L
User Access	User Group User	SC_USR_GRP_USR
User Access	Fact - User	SC_USER

7.8 Usage Tracking

Usage Tracking subject area, upon configured, enables to track the usage history of the dashboard reports.

Some of the key questions that can be answered are:

- More frequently or less frequently used dashboard reports
- Maximum, Minimum, Average response time of any dashboard reports

8. Limitations / Recommendations

Note: ORMB SaaS customers will be responsible for designing, developing, and maintaining their reports and dashboards using the SaaS reporting module

Below are the limitations/recommendations that need to be considered while implementing/using OAS reporting solution:

- Data level security strategy must be decided by customer, ensure that to be implemented by creating Session Variable Initialization Block and applying them on Users/Application roles.
- Any performance related issues for the reports configured on reporting database are to be owned by customer.
- For any customizations in the RPD by the development team, its recommended to create new custom objects (like tables/columns), prefix with 'CUSTOM' in the labels or any changes like joins/renaming/arranging the entities etc., keep a track of all the customizations, must follow the RPD merging techniques, co-ordinate with AMS team when any latest RPD is released, and ensure all the changes are in-place.
- OAS is not recommended to be used as a Data Extraction or Data Dump Tool as it's not built to be a data extraction tool and, if any user exports millions of records to pull into Excel, it burdens the system and can bring down the entire server performance. If there is any strong need to export millions of records from OAS, export to CSV instead.
- If there is any need to add any index on an any entity, development team should request AMS team to create custom indexes on database by keeping a track of the changes being introduced and thorough investigations are recommended to be performed as it can impact the system wherever the entities are being referred.
- If there is a need to add hints on the SQL being issued by the report, below highlighted is the location where it can be added:

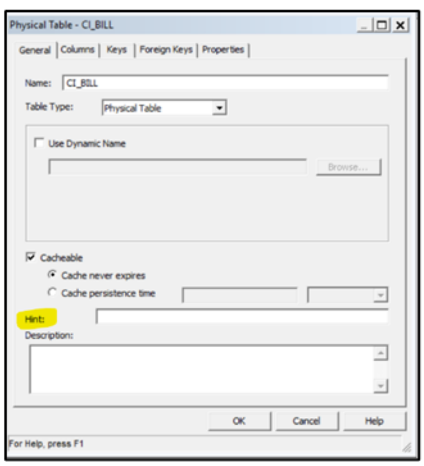

Figure 15: Physical Table Properties

- It's always recommended to create any reports that are time bounded by leveraging the Time dimensions that are modelled in OAS RPD, restricting it to either Current or Prior month, Current or Prior Quarter etc.

  Below are the screenshots for reference:

Subject Area: Payment

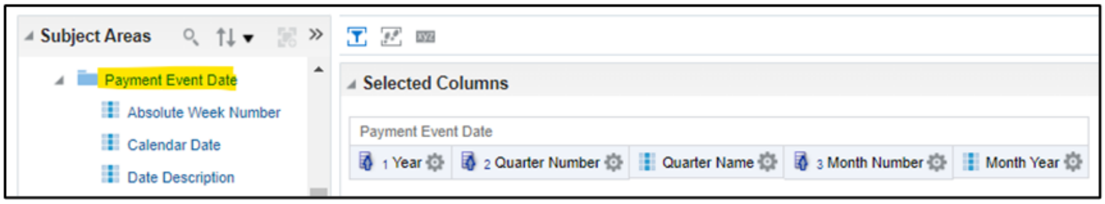

Figure 16: Selecting Columns

Subject Area: Billing

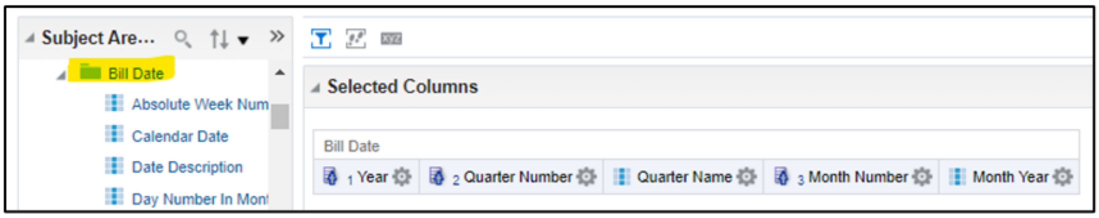

Figure 17: Selecting Columns

- For any requirement to create any report having two different measures from two different entities, a UNION report must be created having the similar dimension criteria.
  - Below are the screenshots for reference, based on a requirement to build a report to show 'Autopay Amount' and 'Bill Segment Calculated Amount' grouped by 'Account' and 'Invoice':

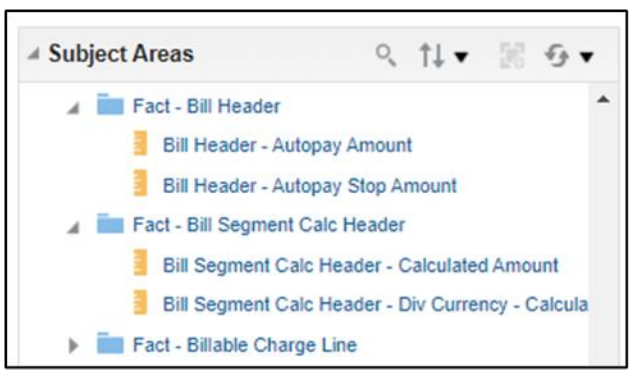

Figure 18: Selecting Measures

  - **First Criteria:** To derive "Autopay Amount" grouped by Account and Bill, have one dummy measure for the other measure per say ("Bill Segment Calculated Amount") that would be needed to build the report.

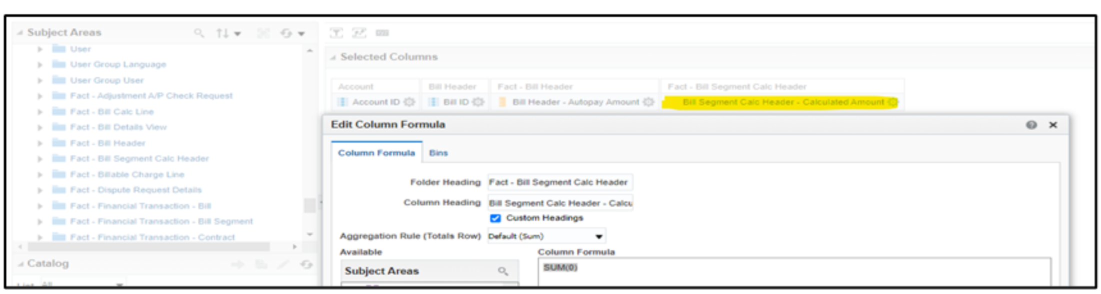

Figure 19: Creating Dummy Measure

- Select the option available at the right corner as highlighted below to create union report.

Figure 20: Combining Results based on Union/Intersection/Difference

- **Second Criteria:** Select the required subject area and create the similar criteria to derive "Bill Segment Calculated Amount", having one dummy measure as a supplement for the measure "Autopay Amount" as part of the First criteria.

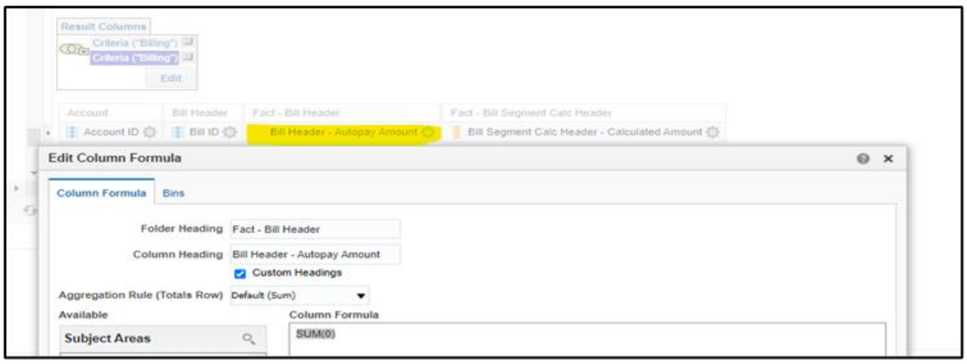

Figure 21: Creating Dummy Measure

- Similarly, if there is any need of showing Payments and Bill Charges grouped by Account, similar UNION report must be built using the subject areas Payment and Billing.
- If there is any requirement to create any report based on match events, **"Financial Transaction – Contract"** available under the subject area can be leveraged.
- If there is any complex report that is taking long time, enable cache and implement cache purging and seeding.
- Create Agents to run any complex report, with the default parameters that helps in retrieving faster when any user hits the same report.
- It is recommended to study the physical query pattern of the report by adding columns from each of the entity to ensure if it is returning expected result set
- It's recommended to create complex measures in RPD rather than creating in the report column formulae. This will reduce the complexity of the reports on the front-end, simplifies maintenance of any such calculations, and ultimately assures that the same logic can be re-used across the board in all dashboards and reports.
- When the report raises error like 'Exceeded configured maximum number of allowed output prompts, sections, rows, or columns' it means that there would be a need of adding few tags or increase the default limits that are configured in instanceConfig.xml file.
- Create Session Variables in OAS RPD to implement Data Level Security
- Ensure the set the log level minimum of 2 to which helps in generating the log with decent information about the report.

- Report can raise error when it exceeds any of the default configurations like MAX_COLUMNS_IN_SELECT/MAX_LOGICAL_DIMENSION_TABLES/ MAX_LOGICAL_FACT_TABLES/MAX_LOGICAL_MEASURES/MAX_SET_OPERATION_BLOCKS/DEFAULT_DB_MAX_EXEC_TIME/MAX_SESSION_LIMIT/MAX_REQUEST_PER_SESSION_LIMIT etc., but recommended to fine tune the report before changing parameter values in NQSCONFIG.ini file.

Note: Before making change any configuration backups must be taken and thoroughly tested as it can impact on other reports and AMS team should be approached for any of these changes.

