

Oracle® Revenue Management and Billing Analytics

Version 2.0.0.0.0

Functional Overview

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Oracle Revenue Management and Billing Analytics Functional Overview

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Preface

About This Document

This guide describes the key features of Oracle Revenue Management and Billing Extractors and Schema and Oracle Revenue Management and Billing Analytics. The guide also lists and describes the technical requirements to use the product, the architecture, and the user interface.

Oracle Revenue Management and Billing Extractors and Schema is used to extract data from a source system, Oracle Revenue Management and Billing, and to subsequently populate a set of star schemas that can be used for business intelligence and analytical purposes via Oracle Revenue Management and Billing Analytics.

Intended Audience

This guide is intended for the following audience:

- End-users
- System Administrators
- Consulting Team
- Implementation Team
- Development Team

Organization of the Document

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

Section No.	Section Name	Description
Section 1	Oracle Revenue Management and Billing Analytics Architecture	Explains the architecture of Oracle Revenue Management and Billing Analytics (ORMBA).
Section 2	Oracle Revenue Management and Billing Extractors and Schema	Describes the key features of Oracle Revenue Management and Billing Extractors and Schema. It also explains how to perform various administration tasks from Oracle Revenue Management and Billing Analytics user interface. In addition, it lists all fact and dimension tables used in Oracle Revenue Management and Billing Extractors and Schema.
Section 3	Oracle Revenue Management and Billing Analytics	Lists and describes the dashboards available in Oracle Revenue Management and Billing Analytics (ORMBA).

Related Documents

You can refer to the following documents for more information:

Document	Description
<i>Oracle Revenue Management and Billing Analytics Version 2.0.0.0.0 Release Notes</i>	Lists the features and architecture of Oracle Revenue Management and Billing Analytics. It also lists the supported platforms, supported ORMB versions, and highlights known issues in this release.
<i>Oracle Revenue Management and Billing Analytics Installation Guide</i>	Lists the pre-requisites, supported platforms, and hardware and software requirements for installing the Oracle Revenue Management and Billing Analytics application. It also explains how to install the Oracle Revenue Management and Billing Analytics application.
<i>Oracle Revenue Management and Billing Analytics Security Guide</i>	Describes how to configure security for Oracle Revenue Management and Billing Extractors and Schema and Oracle Revenue Management and Billing Analytics.

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1. Oracle Revenue Management and Billing Analytics Architecture

This section explains the architecture of Oracle Revenue Management and Billing Analytics (ORMBA).

1.1 Logical Topology

Oracle Revenue Management and Billing Analytics (ORMBA) follow a layered architecture, which consists of the following four logical layers:

- Source
- Replication
- Transformation
- Presentation and Access

The Source layer represents the source system which is Oracle Revenue Management and Billing (ORMB). Oracle Revenue Management and Billing Extractors and Schema delivers functionality of the Replication and Transformation layers. Oracle Revenue Management and Billing Analytics delivers the functionality of the Presentation and Access layer.

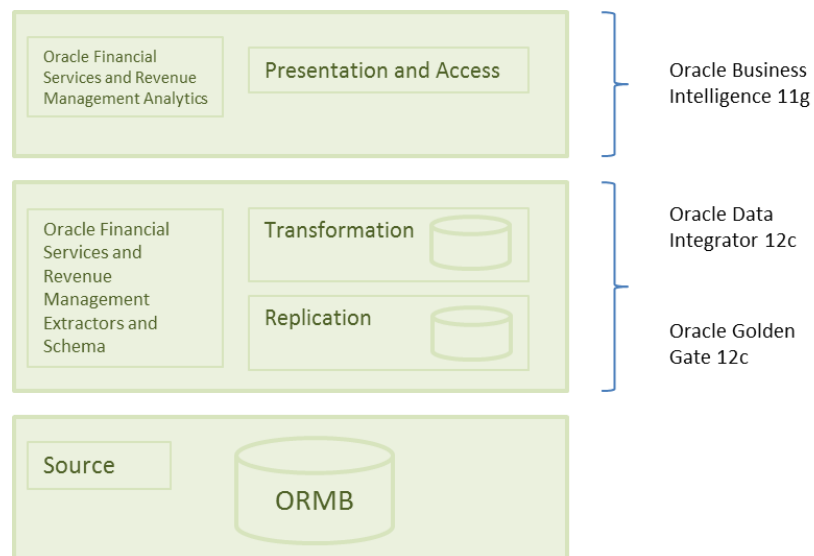


Figure 1: ORMB Analytics Topology

1.1.1 Replication Layer

The Replication layer houses the replication objects to which the changes to the data in the source system are replicated. The replication is non-intrusive, poses only minimal overhead to source system, does not require any changes to the source system and can be done in batch or in near real-time. The replication is implemented using Oracle Golden Gate (OGG).

1.1.2 Transformation Layer

The Transformation layer is decomposed into the following layers:

- **Staging** – This layer represents the temporary staging area where the transformation, validations, enrichment, data cleansing and other mediation operations on the source data are executed for mapping the source to target objects. The mediation between source and target is implemented using Oracle Data Integrator (ODI).
- **Target** - This layer is the data mart where the 'stars' reside. The objects in this layer are dimensions, facts, materialized views.

1.1.3 Presentation and Access Layer

The Presentation and Access layer represents the presentation and reporting services which display the 'stars' to BI users in the form of rich and attractive dashboards, charts, and reports. The presentation layer is implemented using Oracle Business Intelligence Enterprise Edition (OBIEE) which has comprehensive enterprise reporting capabilities and also supports ad-hoc as well as multi-dimensional analytical capabilities.

2. Oracle Revenue Management and Billing Extractors and Schema

This section describes the key features of Oracle Revenue Management and Billing Extractors and Schema whose purpose is to extract and transform the data into target 'stars' that can be used to drive reports and answer business questions from the data within the Oracle Revenue Management and Billing source system.

2.1 Data Integration Overview

Data Integration can be decomposed into Data Replication and Data Transformation.

Data Replication, implemented via Oracle Golden Gate, is responsible for replicating changes in source system tables to a copy in the Replication Layer as well as adding the relevant journaling columns to reflect the replication pattern (History, Overwrite, Effective Date) to support type1 and type2 SCD (slow changing dimensions) in the 'stars'.

Data Transformation moves the data from the replica to the target fact and dimensions via a set of interfaces implemented in Oracle Data Integrator.

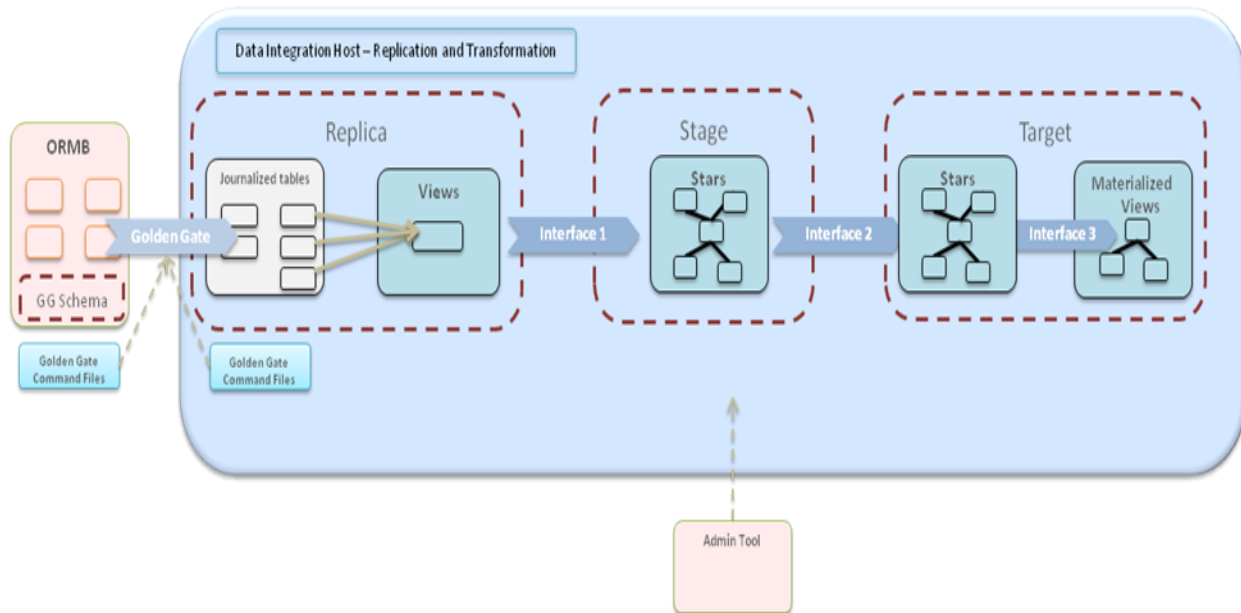


Figure 2: Data Integration

2.2 Administration User Interface

This section lists and explains how to perform various administration tasks from Oracle Revenue Management and Billing Analytics user interface.

2.2.1 Overview

The Oracle Revenue Management and Billing Analytics Administration UI allows administrator to configure settings that control how the ORMBA data load processes work.

Go to the administration URL and login using the valid credentials.



Figure 3: ORMB Analytics Welcome Page

After the login is successful, the landing page is displayed.

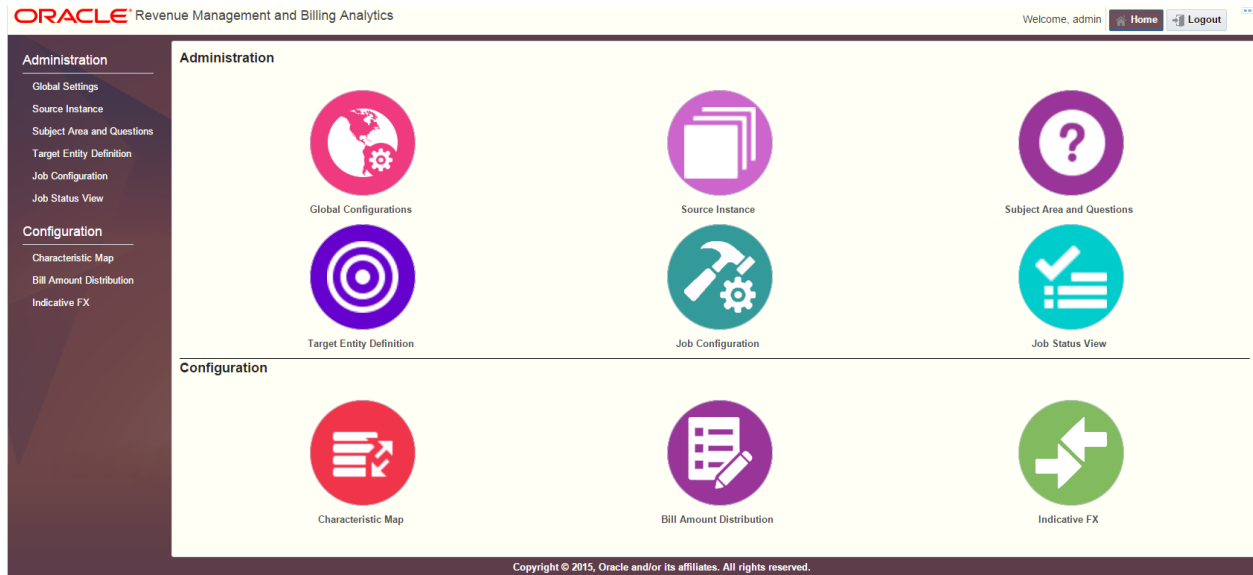


Figure 4: ORMB Analytics Home Page

There are two main sections in the administration UI:

- Administration
- Configuration

Administration section helps the user to define a source instance and map it till the data warehouse. The configurations that will enhance the data flow from the source system can be done in configuration section.

The ORMBA product is extensible and configuration driven. There are multiple configurations that need to be done on the out of the box product. Some of these configurations are applicable system wide. Some are applicable to source products and some are entity and instance specific.

2.2.2 Control Parameters

Global Settings apply to all entities or affect the behavior of the system as a whole. ORMBA basic setup is completed only when these configurations have been set up correctly.

Open the browser to go to the administration UI and click on the **Global Settings** link under the Administration menu.

ORACLE Revenue Management and Billing Analytics Welcome, admin [Home](#) [Logout](#)

Administration

Global Settings

Source Instance

Subject Area and Questions

Target Entity Definition

Job Configuration

Job Status View

Configuration

Characteristic Map

Bill Amount Distribution

Indicative FX

Global Settings ✎ Edit

Description	Value
Version of the Product	2.0.0.0.0
Name of the Product	ORMBA
Language	ENG
Date from which all ETL jobs will be configured to start the initial load	01-Jan-2000
Threshold value to consider for parallel loading for high volume table	10000
Number of days for which the logs would be retained	7
Corporate Currency, used in dashboards for cross divisional analysis	USD
Time of the day upto which all changes from the source will be loaded by the ETL jobs	12:00:01
Identifier for Global Division	GLB
Prefix for identifying manual files from file name	TEST
Represents the number of rankings to be displayed in the result of any bottom ranking analysis	10
Represents the number of rankings to be displayed in the result of any top ranking analysis	10
Average value for a transaction in corporate currency - used in unrealized revenue computation	1
Number of days for which job execution status can be viewed	15
Maximum number of MV interfaces which can run in parallel	16
Database Edition Type - Mention the type of the Oracle Database, whether it is Stanadar Edition(SE) or Enterprise Edition(EE)	SE

Figure 5: Global Settings Page

The parameter descriptions are self-explanatory however some additional detail needs to be mentioned about the partitioning parameter.

2.2.3 Scheduling

ORMBA administration UI allows the user to schedule the execution of the data loading job, to synchronize the warehouse to the latest state.

This is done in two steps:

1. Create Target Entity
2. Create Job

Target entities can be defined through the Target Entity Definition page. Target entities can be dimensions, facts or replication entities (when using non-GG based replication). The same target entity may be loaded from multiple source instances. While defining the target entity, the scheduler parameters such as type, interval etc. also can be configured.

Note: While defining target entity name, make sure that the entity name is same as the table name. The ODI package name given here should be the name of the package in ODI.

Target Entity Definition

Entity Name *

Entity Type *

Entity Sub Type *

Subject Area


ODI Package Name *

Stage Retention (Days)

User Execution Procedure

Characteristic Entity

Scheduler Configuration

Start Date (yyyy-MM-dd HH:mm:ss)  Slice Duration *

Schedule Type * Maximum Retry *

Slice Duration Frequency * Retry Interval (Minutes)*

Figure 6: Target Entity Definition Page

Attribute	Purpose
Start Date	Schedule start date
Schedule Type	The following three modes of schedules are supported: <ul style="list-style-type: none"> • Incremental Load - Loads are executed as soon as data is available for load • One Time Load - Load is executed only once.
Slice Duration Frequency	Different objects have differing data distribution and load processing requirements. This attribute controls the duration between two slices. The following options are supported: <ul style="list-style-type: none"> • Day(s) • Week(s) • Month(s) • Quarter(s) • Year(s) • Hour(s) • Minute(s)
Slice Duration	The number identifying the slice duration based on the slice duration type.

Attribute	Purpose
Maximum Parallel Count	To efficiently load data, it may be necessary to execute multiple instances, each instance working on a different data set. This attribute will control how many parallel executions can be spawned for a single entity load. This feature is currently available only for Initial Load . For example, if for a Job A Maximum Parallel Count is '3', the whole data set will be equally divided into 3 slices equally and each slice will run parallel. Slice Duration parameter has no role in this. Slice duration will be taken into account only in case of Incremental Load .
Maximum Retry	This attribute will control the maximum number of retry attempts. Once this limit is reached and the load is still failing it will not be retried.
Retry Interval (Minutes)	The base architecture has been designed for automatic retries. In case of failures jobs will be retried and this attribute controls the interval between successive retries in case of a failure. Default is 30 minutes but can be tweaked as per requirement.

The **Job Configuration** page in the ORMBA administration UI enables the user to provide configuration for the package (the executable logic) for populating the target entities for each instance.

2.2.3.1 Retry Behavior in Scheduling

In ORMBA the Job scheduler offers a facility to retry the execution of failed jobs. '**Maximum Retry**' and '**Retry Interval**' are the two parameters which decide this behavior. The execution of the jobs will be repeated up to 'Maximum Retry' count based on the retry interval. This is common for both initial and incremental load. Even after all the retries if the job fails again all the slices or instance of the same will be Abandoned – 'A' and the entity corresponding to that job will be moved to inactive status ,that means this won't be executed further unless and until someone corrects the issue manually changes the entity to active status.

The screenshot shows a dialog box titled "Add new job." with a close button (X) in the top right corner. The dialog contains the following fields:

- Description**: A text input field with a red asterisk indicating it is required.
- Instance Number**: A dropdown menu with a red asterisk, currently showing "1".
- Target Entity**: A dropdown menu with a red asterisk.
- Package Name**: A text input field.
- Slice Start Time**: A text input field with a red asterisk and a calendar icon.
- Enabled**: A dropdown menu with a red asterisk, currently showing "Yes".
- User Execution Procedure**: A text input field.
- Execution Sequence**: A text input field.

Figure 7: Add New Job Configuration Dialog Box

Configure the below parameters to create a new job:

Attribute	Purpose
Description	A brief description of the job
Instance Number	To be populated for instance specific deviations
Target Entity	Reference of the target entity
Package Name	Name of the ODI load job corresponding to the target entity
Slice Start Date Time	The starting timestamp for next execution
Enabled	Indicates whether the schedule is active or not
User Execution Procedure	Custom procedure name
Execution Sequence	To control of the sequence of the execution

2.2.4 Purging of Replica Tables

Each source table that has been marked for replication has a replica table created in the replication schema. The tables that are used as source for type 2 dimensions retain history for each change. Over a period of time the volume in the replication area can grow huge.

It is recommended to retain the data in the replication layer for as long as it is feasible to do so considering the data storage requirements as this will enable the user to reload the warehouse at any given point of time. This comes in handy when additional user-defined columns are being added, which requires a reload of all entities where the new user-defined column has been configured for load. The table `BM_SOURCE_TABLE` has a column `REPL_RETAIN_DAYS`, which can be modified to control the purge in replication area.

A minimum retention period of 30 days is enforced. If there are multiple target entities dependent on the source table, then the least of the last sync timestamp of the entities is considered. If the least of last sync date is older than the retention period, then the data older than this data is purged.

2.2.5 User Exit Configuration

ORMBA provides a simplified process for extending out of the box dimensions and facts. This relies on a configurable procedure with a predefined signature. All entities have been set up with a functionality that calls the custom procedure if configured.

The first step is loading a staging table using a source view. Once the staging table is loaded configurations are looked up and if the CM procedure has been configured for the job, then a UDX table is created. The UDX table contains the natural key and all user extensible columns. The table acts as a template and implementers are expected to update the UDX columns based on the natural key columns and the input parameters.

After the CM procedure is executed successfully, the data is copied back into the staging table. If the entity being extended is a fact then user defined foreign keys are referenced again. After this the final data is loaded into the target entity.

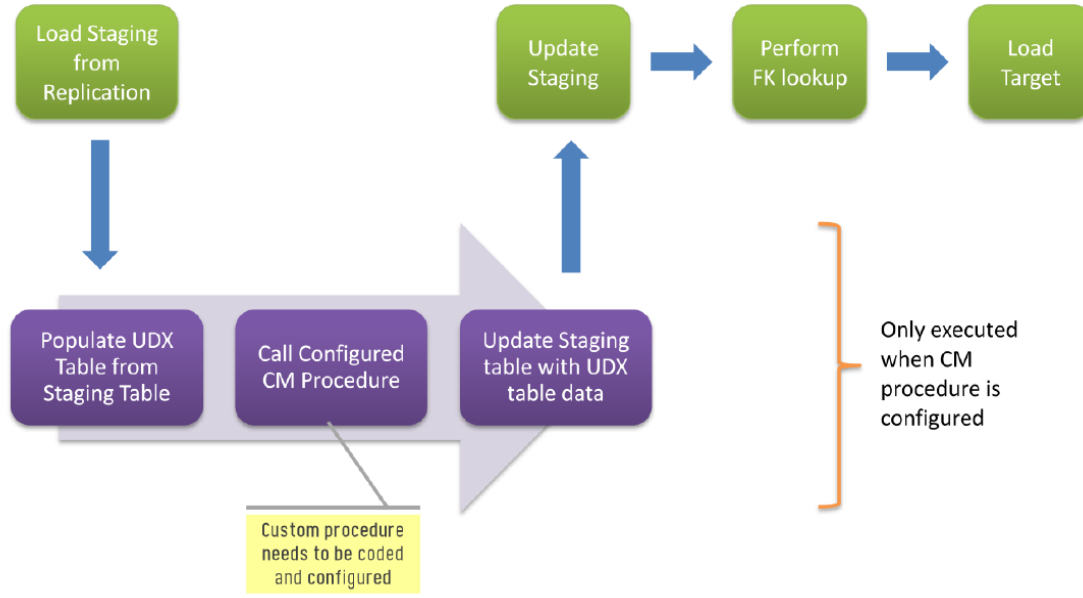


Figure 8: User Exit Configuration

Follow the instructions below to create the User Exit procedure for BD_MSG dimension:

1. Click on the “ODI Client” launcher present on your VM desktop.
2. Click on the “Connect to Repository” item on the side navigator.
3. Press “OK” on the Oracle Data Integrator Login popup menu. Credentials have already been set up.
4. Once you have logged in, navigate to the “Designer Tab”.
5. Create a project “Customizations” (if not already exists).
6. Create the folder “Dimensions” (if not exists) and expand the folder.
7. Right-click on the procedures item and click on the “New Procedure” in the context menu that opens up.
8. Enter the name of the procedure “CM_BD_MSG_UDX” and in the comments section enter “Populate UDF10_CD, UDF10_DESCR columns”.
9. Click on the “Details” tab on the left hand side navigation section. This will open the editor window. Click on the green + to add a new step.
10. Enter the name for the step and select “Replication” from the dropdown labeled “Schema”. Refer to the screenshot below.
11. Save the changes and click on the green triangle to execute. The execution popup will show. Select appropriate from the dropdown labeled “Context:” and press Ok.
12. Navigate to the main “Operator” tab and expand Date > Today to view the status of the execution.

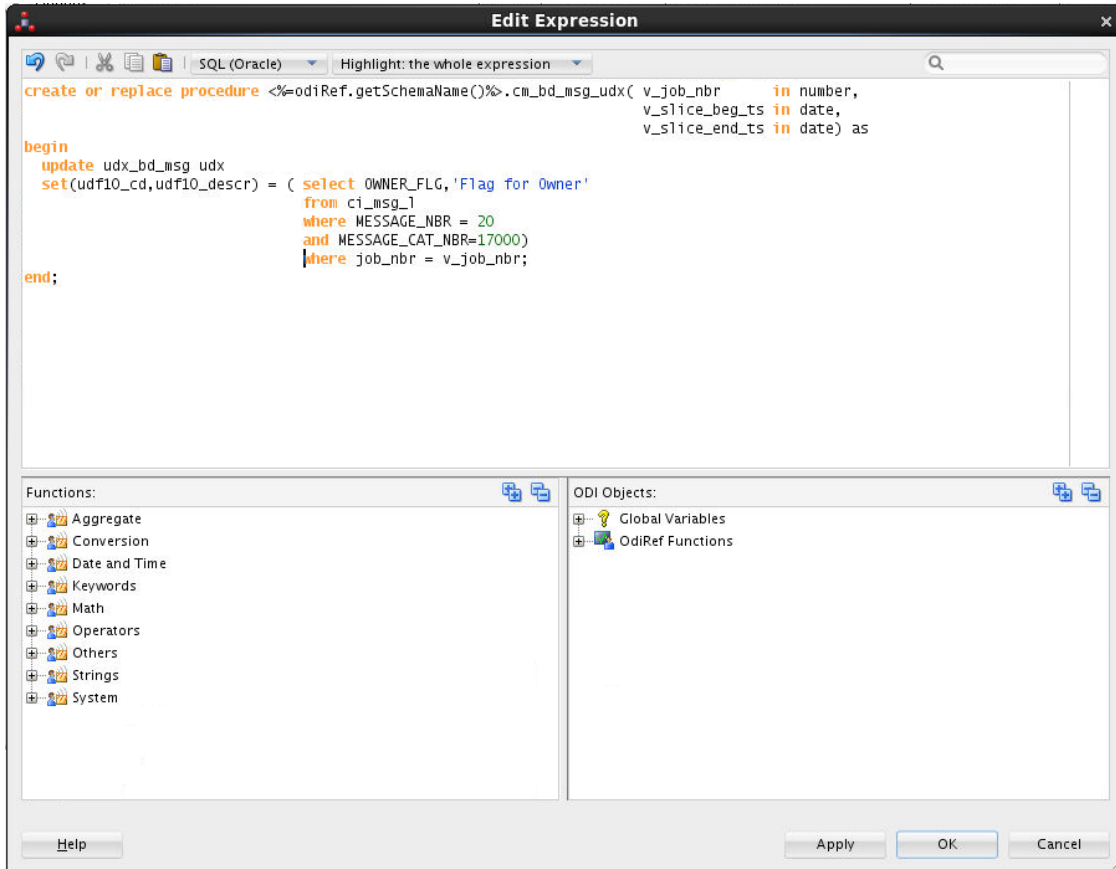


Figure 9: User Exit Procedure

Follow the instructions below to configure the user extension procedure for the dimension:

1. Open the Admin UI in a browser and login.
2. Click on the tab “Job Configuration”.
3. Select the Job Id for Target Entity ‘BD_MSG’.
4. Click on the pencil icon to bring up the edit screen.
5. The Job configuration UI pops up as shown below.
6. Set the value of User Execution Procedure as “CM_BD_MSG_UDX” as shown below.
7. Click on the “Save” button.
8. Ensure that the job is enabled by setting the “Enabled” to yes.
9. Now monitor the job execution and verify the data in the dimension.

Job Configuration


Description *	<input type="text" value="Message Dimension"/>
Instance Number	1
Target Entity	BD_MSG
Package Name	<input type="text"/>
Slice Start Time	<input type="text" value="2015-06-03 19:49:30"/> 
Enabled *	<input type="text" value="Yes"/> ▼
User Execution Procedure	<input type="text" value="CM_BD_MSG_UDX"/>
Execution Sequence	<input type="text"/>

Figure 10: User Extension Procedure

2.2.6 Configurable Characteristics

Characteristics fields are one of the extensible features available in the Oracle Revenue Management and Billing system. To make this information available in Oracle Revenue Management and Billing Analytics, the same should be configured in the characteristic mapping section in the administration UI.

ORACLE Revenue Management and Billing Analytics

Administration

- Global Settings
- Source Instance
- Subject Area and Questions
- Target Entity Definition
- Job Configuration
- Job Status View

Configuration

- Characteristic Map
- Bill Amount Distribution
- Indicative FX

Characteristic Map

User can map upto 25 characterisitics from source table to the target

View ▾
✚ Create
✎ Edit
✖ Delete
📄 Detach

Entity Name
BD_DIVISION
BD_USER
BD_TD_TYPE

View ▾
📄 Detach

Mapping Field	Characteristic Code
Characteristic 1	No Mapping
Characteristic 2	No Mapping
Characteristic 3	No Mapping
Characteristic 4	No Mapping
Characteristic 5	No Mapping
Characteristic 6	No Mapping
Characteristic 7	No Mapping
Characteristic 8	No Mapping
Characteristic 9	No Mapping
Characteristic 10	No Mapping
Characteristic 11	No Mapping
Characteristic 12	No Mapping
Characteristic 13	No Mapping
Characteristic 14	No Mapping
Characteristic 15	No Mapping
Characteristic 16	No Mapping
Characteristic 17	No Mapping
Characteristic 18	No Mapping
Characteristic 19	No Mapping
Characteristic 20	No Mapping
Characteristic 21	No Mapping
Characteristic 22	No Mapping
Characteristic 23	No Mapping
Characteristic 24	No Mapping
Characteristic 25	No Mapping

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Figure 11: Characteristic Mapping Page

The system allows the users to configure 25 character data fields against each entity. During the data load process, the load job will do a look up on the characteristic mapping (if configured) to enhance the data which is being send to the warehouse.

2.2.7 Tax/Revenue Distribution Codes

In order to present the revenue and tax charges accurately in the Oracle Revenue Management and Billing Analytics Dashboards, the distribution code has to be categorized appropriately in the system.

The administration UI provides three parameters in the global configuration for this purpose:

- **Distribution** - The characteristic code in the distribution that represents the charge type should be defined here.
- **Bill Charge** - The characteristic code value that represents the bill charges should be configured here. Multiple values can be configured as a comma separated string.
- **Tax Charge** - The characteristic code value that represents the tax charges should be configured here. Multiple values can be configured as a comma separated string.

2.2.8 Indicative Exchange Rate for Conversion to Corporate Currency

The Oracle Revenue Management and Billing Analytics Dashboards presents the amount values in a single currency (corporate currency) wherever multiple divisions are in context. The corporate currency has to be defined along with the global configurations in the Administration UI.

Indicative FX

From Currency	To Currency	Multiplier
Singapore Dollar SGD	US Dollar USD	0.75
New Zealand Dollar NZD	US Dollar USD	0.74
Egyptian Pound EGP	US Dollar USD	0.13
Indian Rupee INR	US Dollar USD	0.016
Pound Sterling GBP	US Dollar USD	1.156
Euro EUR	US Dollar USD	1.12
UAE Dirham AED	US Dollar USD	0.27

Figure 12: Exchange Rates

Administration UI also provides a page where an indicative FX (exchange rate) from different division currencies to the corporate currency, can be defined. While rendering any analysis that involves multiple divisions, then the dashboard does a currency conversion based on the indicative FX configured against the corporate currency.

Note: This is applicable only when there is a single warehouse serving different ORMB installations which use different currencies.

2.2.9 Job Monitoring

The job status view page in administration UI is used for tracking the execution of the ELT processes. An entry will be created for each execution. Some attributes are populated from the SNP_SESSION table which is used by ODI to track sessions.

Job status view page gives three different views of the jobs:

- **Jobs Execution Status:** Displays the status of the jobs which are completed.

Instance	Job Name	Entity Name	Scheduled Start Time	Session Start Time	Session End Time	Status	More
1	BD_FISCAL_CAL Job	BD_FISCAL_CAL	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BF_ADJUSTMENT Job	BF_ADJUSTMENT	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_FISCAL_CAL Job	BD_FISCAL_CAL	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	6/5/2015	6/5/2015	Done	

Figure 13: Jobs Execution Status

- **Jobs Ready For Execution:** Displays the list of jobs which are ready for execution.

Instance	Job Name	Entity Name	Scheduled Start Time	Slice Start Time	Slice End Time	More
1	BD_ACCT Job	BD_ACCT	6/5/2015	4/12/2010	6/2/2015	
1	BD_ACCT Job	BD_ACCT	6/5/2015	2/20/2005	4/12/2010	
1	BD_ACCT Job	BD_ACCT	6/5/2015	1/1/2000	2/20/2005	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	4/13/2010	6/4/2015	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	2/20/2005	4/13/2010	
1	BD_ADJ_TYPE Job	BD_ADJ_TYPE	6/5/2015	1/1/2000	2/20/2005	
1	BD_FISCAL_CAL Job	BD_FISCAL_CAL	6/5/2015	1/1/2000	6/4/2015	

Figure 14: Jobs Ready For Execution

- **Jobs Waiting For Execution:** Displays the list of jobs which are waiting in the execution queue.

Instance	Entity Name	Reason	Slice Start Time	Slice End Time	More
1	BD_TXN_UDD4	Entity is deactivated	5/8/2015	6/5/2015	
1	BD_TXN_UDD5	Entity is deactivated	5/8/2015	6/5/2015	
1	BD_USER	Entity is deactivated	5/25/2015	6/5/2015	
1	BF_FEED	Entity is deactivated	5/8/2015	1/1/2000	
1	BF_GL	Entity is deactivated	5/11/2015	1/1/2000	
1	BF_PAYMENT	Entity is deactivated	5/8/2015	1/1/2000	
1	BF_PAY_EXCP	Entity is deactivated	5/13/2015	1/1/2000	
1	BF_PAY_TNDR	Entity is deactivated	5/8/2015	1/1/2000	
1	BF_PRICE	Entity is deactivated	5/8/2015	1/1/2000	
1	BF_SA	Entity is deactivated	5/9/2015	1/1/2000	
1	BF_TD	Entity is deactivated	5/14/2015	1/1/2000	

Figure 15: Jobs Waiting For Execution

2.3 Target Data Overview

Oracle Revenue Management and Billing Extractors and Schema fact tables based on Oracle Revenue Management and Billing data cover areas such as:

- Financial Transactions: split by Receivables, Adjustments and Payments
- GL Distribution
- Contract
- Transaction Feeds
- To-Do
- Pricing and Billable Charges

2.3.1 Fact Tables

Table	Description
BF_ADJUSTMENT	Financial Transaction adjustment measures
BF_BILL	Financial Transaction bill segment measures
BF_FEED	Transaction Feed measures
BF_GL	Financial Transaction GL distribution
BF_PAY_EXCP	Payment Exceptions
BF_PAY_TNDR	Payment Tender Measures
BF_PAYMENT	Financial Transaction payment measures
BF_PRICE	Billable Charges and Pricing measures
BF_SA	Contract measures
BF_TD	To-Do Measures
BF_TXN	Transaction Record Measures
BF_TXN_ERROR	Transaction Errors

Financial measures are stored in Pricing, Invoice and Division currencies as appropriate to each fact table.

Each fact table has a number of unpopulated attributes to support extensibility by the end user. These include user defined measures and user defined degenerate dimensions.

2.3.2 Dimension Tables

Table	Description	SCD Type
BD_ACCT	Account	SCD2
BD_ADJ_TYPE	Adjustment Type	SCD2
BD_CUST	Customer	SCD2

Table	Description	SCD Type
BD_DATE	Date	SCD1
BD_DIVISION	Division	SCD2
BD_DST_CODE	Distribution Code	SCD2
BD_FISCAL_CAL	Fiscal Calendar	SCD1
BD_MONTH	Month	SCD1
BD_MSG	To Do Message	SCD1
BD_PRICEASGN	Price Line Item	SCD1
BD_PRICECOMP	Price Assignment	SCD2
BD_PRICELIST	Price Component	SCD2
BD_PRICE_LINE	Price List	SCD2
BD_PRODUCT	Product	SCD2
BD_RATE	Rate	SCD2
BD_SA	Contract	SCD2
BD_SA_TYPE	Contract Type	SCD2
BD_TD	To Do	SCD2
BD_TD_PRIORITY	To Do Priority	SCD1
BD_TD_ROLE	To Do Role	SCD2
BD_TD_TYPE	To Do Type	SCD2
BD_TENDER_TYPE	Payment Tender Type	SCD2
BD_TNDR_SRCE	Payment Tender Source	SCD2
BD_TXN_REC_TYPE	Transaction Record Type	SCD2
BD_TXN_SOURCE	Transaction Source	SCD2
BD_USER	User	SCD2

In addition to the above dimensions, there are 5 user-defined dimensions that have been created for each fact table. These are unpopulated and are available for extensibility purposes.

2.4 Parallel Processing

ORMBA supports parallel processing in case of facts execution. To create a package for parallel processing:

1. Bring `slicing_ts` and `slicing_group` into the source view, add the below filter condition in ODI:

```
Default.BF_GL_VW.JRN_SLICING_GRP IN
(#ORMB_BI.SLICING_GRP_VALUES) AND
Default.BF_GL_VW.JRN_SLICING_TS BETWEEN TO_DATE
```

```
(#ORMB_BI.BM_SLICE_BEG_TS, 'YYYYMMDD') and TO_DATE
(#ORMB_BI.BM_SLICE_END_TS, 'YYYYMMDD')
```

Where ORMB_BI.SLICING_GRPS_VALUES is a project variable

2. Create a copy of the available parallel processing package and change the child scenario to our desired scenario.
3. Change the execution mode of the child scenario to 'Asynchronous' from the Properties tab of the same.
4. Also select the command tab from the properties window and pass the additional variables which are used in the child scenario.

For example,

```
OdiStartScen    "-SCEN_NAME=SCBL_BF_PKG_GL"
                "-SCEN_VERSION=001"
                "-SYNC_MODE=2"
                "-ORMB_BI.SLICING_GRPS_VALUES=#ORMB_BI.SLICING_GRPS"
                "-ORMB_BI.BM_JOB_ID=#ORMB_BI.BM_JOB_ID"
                "-ORMB_BI.BM_SLICE_BEG_TS=#ORMB_BI.BM_SLICE_BEG_TS"
                "-ORMB_BI.BM_SLICE_END_TS=#ORMB_BI.BM_SLICE_END_TS"
                "-ORMB_BI.BM_LOAD_TYPE=#ORMB_BI.BM_LOAD_TYPE"
```

5. Now, regenerate the parent scenario and run the same. This will run multiple child scenarios in parallel depending on the variable values.

Note: Transaction related facts are not supported for running in parallel.

2.5 Application Parallelism vs. DB Parallelism

ORMBA supports both Application Parallelism and DB Parallelism. The user has the option to go with either or mix of both. DB Parallelism is implemented using parallel hint in SQL with degree 8 for the below heavy duty facts.

- BF_BILL
- BF_PRICE
- BF_PAYMENT
- BF_GL

If more threads are available for processing of these facts, user can make use of application level parallelism along with DB level parallelism by specifying the thread count as multiple of 8 following the below thumb rule.

i.e. DB Parallel Degree * No of Threads (**ODI_NUM_THREADS**) = Total No. of Threads Available

If the no of threads supported by the machine is less than 8, then these views need to be updated with appropriate parallel hint. Please make sure that the corresponding changes are made in INITTRANS of warehouse tables, indexes and partitions. For the other facts, the user can enable application level parallelism as per their need.

3. Oracle Revenue Management and Billing Analytics

Oracle Revenue Management and Billing Analytics access to data sourced from Oracle Revenue Management and Billing using Oracle Business Intelligence Enterprise Edition (OBIEE) to present a series of dashboards showing tables, bar graphs and pie charts. This guide contains information that is specific to Oracle Revenue Management and Billing Analytics and does not cover common end user tasks for Oracle Business Intelligence Enterprise Edition.

This section describes the dashboard content which is organized as follows:

- Financial Transactions
- Billable Charges
- Product Pricing
- Feed Management
- Contracts
- To Dos

Each of the above dashboards has its own corresponding subject area corresponding to a physical star in the database.

Each dashboard comprises a number of pages that present information from the subject area through a set of visualizations to the end user, which are outlined in the rest of this section.

The dashboards can be accessed from the 'Index' dashboard which acts a navigation page to the content. Individual analyses can be accessed from the OBIEE catalog menu assuming the user has been granted the relevant privileges by the system administrator.

ORMBA provides two themes for the dashboard - THEME1 and THEME2. THEME1 is the default theme. The admin user can change the theme by editing the dashboard properties.

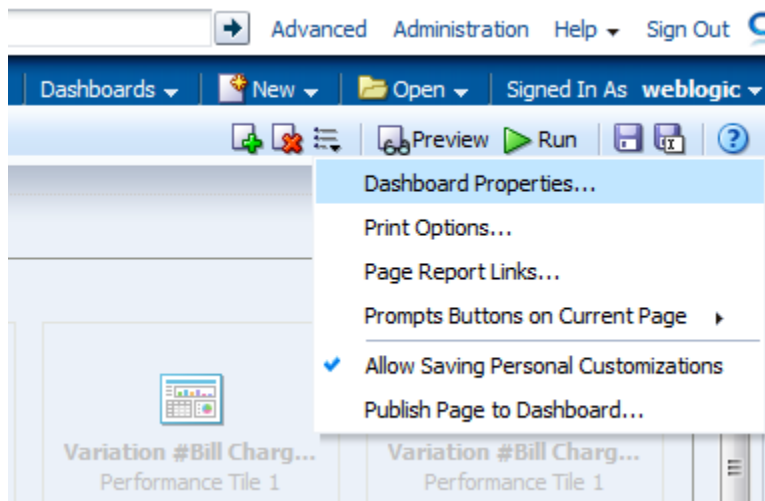


Figure 16: Dashboards Menu Options

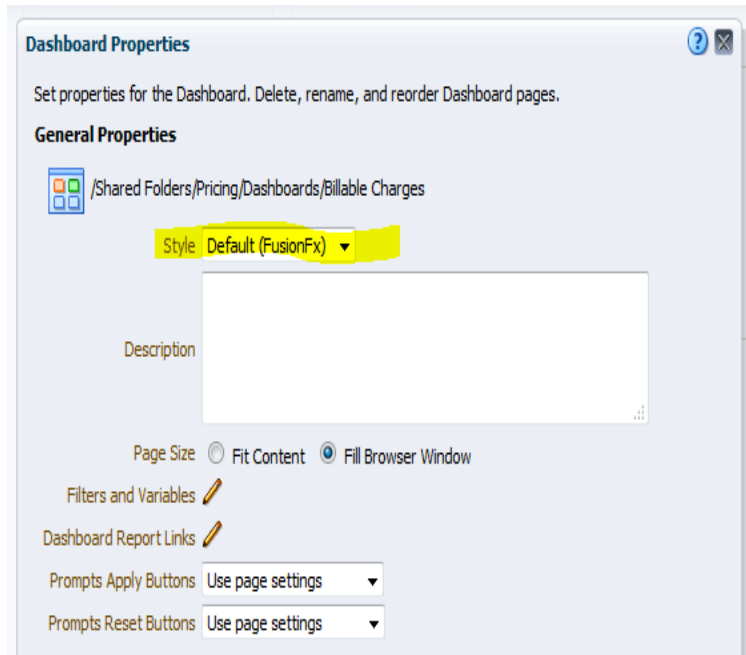


Figure 17: Dashboard Properties

3.1 Financial Transactions

This dashboard has six pages, listed in the table below, that provide answers to the following types of analyses:

- How much is the total value of receivables/adjustment/payment and what is the variation from the last month?
- What is the trend for the last N months?
- What is the distribution across division, currency, customer segment?
- Which are the top/bottom N products?
- Who are the top/bottom N customers?

Page	Contains
Summary	<ul style="list-style-type: none"> • Receivables by Division • Payments by Division • Adjustments by Division
Receivables	<ul style="list-style-type: none"> • Top N Customers • Receivables by Customer Segment • Receivables by Currency • Receivables Trend • Top N Products • Bottom N Products

Page	Contains
Adjustments	<ul style="list-style-type: none"> • Adjustments by Customer Segment • Top N Adjustments • Adjustments Trend • Break Down by Adjustment Type
Payments	<ul style="list-style-type: none"> • Top N Payments • Payments by Customer Segment • Payments by Currency • Payments Trend • Payment Tenders by Source • Cancellations by Reason • Payment Tenders Trend • Payment Tenders by Tender Type
Payment Suspense Management	<ul style="list-style-type: none"> • Distribution By Error-type • Error Trend • Review Pending Trend
General Ledger	<ul style="list-style-type: none"> • Breakdown By Distribution • Breakdown By GL Account • Amount For Distribution Codes • GL Amount Across Last Months

The Receivables, Adjustments, Payments and General Ledger pages have page level prompts that enable filtering of the data. They also have a link 'Printable Report' that opens a new pages containing a tabular report that can be using for further analysis, printing or export.

3.2 Billable Charges

This dashboard has four pages, listed in the table below, that provide answers to the following types of analyses:

- What is the breakdown of charges across divisions?
- What is the breakdown of charges across customer segments?
- What is the breakdown by feed type?
- How are my products performing on a month-by-month basis?
- Who are my best customers?

Note: Pass through charges will be excluded in these dashboards.

Page	Contains
Summary	<ul style="list-style-type: none"> • Charges By Division • Charges By Customer Segments • Charges By Contract Types • Charges By Assignment Type • Charges By Aggregation Level
Trends	<ul style="list-style-type: none"> • Volume Pricing • Per Transaction Pricing
Rankings	<ul style="list-style-type: none"> • For Current Month : • Top N Price Lists • Bottom N Price Lists • Top N Products • Bottom N Products • Top N Customers • Bottom N Customers
Report	<ul style="list-style-type: none"> • Tabular detail of Product Pricing.

3.3 Product Pricing

There is a single page on this dashboard where the user can obtain an overview of the products within each division. From this page the user can drill into a product to get a breakdown of the pricing details for a given product for example:

- Comparison of Standard vs. Agreed Pricing
- Pricing by Parameter
- Different Price Variations (Price Lines) for a product / division. For each price variation, the different Price lists , computation models and Price points available
- Monthly trends – calculation amount, calculation lines and billable charges

The types of questions that can be answered from this analysis are:

- What is the trend of transactions over various tiers (step pricing)?
- What is the trend of transaction volume and revenue over various tiers (step pricing)?
- What is the trend of fee amount per price-point for a step pricing model?
- What is the trend of billable charges (for a product) price through aggregated / per-transaction pricing for the last N months?
- Which are the products with highest no: of agreed prices?
- Which are the products with highest no: of billable charges?
- What are the top N pricelists?
- What all are the price variation combinations used for a product?
- Minimum/Maximum and Mean price for a product over last N months
- Minimum/Maximum and Mean price for a product for a Customer

3.4 Feed Management

This dashboard has four pages, listed in the table below, that provide answers to the following types of analyses:

- What is the trend of transaction volumes over last N months?
- How many manual transactions are processed over last N months?
- What is the distribution of transaction process status?
- What is the transaction activity across division for the month?
- What is the trend of feed processing over last N months?
- How many manual transactions are processed over last N months?
- What is the breakdown of transaction errors by reason?

Page	Contains
Summary	<ul style="list-style-type: none"> • Transactions Status • Feeds Status • Activity Across Divisions • Activity Across Feed Processors
Transaction	<ul style="list-style-type: none"> • Unrealized Revenue • Manual Transaction Trends • Transaction Trends
Feed	<ul style="list-style-type: none"> • Valid/Invalid Feeds Over Last Months
Error	<ul style="list-style-type: none"> • Transaction Errors by Reason

The Summary page has two links 'Print Transactions Report' and 'Print Feeds Report' that render a new page containing a tabular report that can be using for further analysis, printing or export.

3.5 Contracts

This dashboard has two pages, listed in the table below, that provide answers to the following types of analyses:

- What is the churn?
- How many contracts are in the pipeline?
- What is the revenue projected vs actual trend?
- What is the 'win'/'loss' ratio?
- What are the major reasons for contract closures?

Page	Contains
Summary	<ul style="list-style-type: none"> • Top N Contracts • Bottom N Contracts • Breakdown by Segments • Breakdown by Divisions • Breakdown by Contract Types • Contract Lifecycle Breakdown • Proposal Decline Reason
Details	<ul style="list-style-type: none"> • Proposal Trend • Lost Revenue Trend • Contract Trend • Inactive Contracts

The Summary page has a links 'Print Contracts Report' that renders a new page containing a tabular report that can be using for further analysis, printing or export.

3.6 To Dos

This dashboard has four pages that provide answers to the following types of analyses:

- What is the trend of To-Do entries over the last N months?
- What is the average completion duration of To-Do entries?
- What is the trend of To-Do entries by day of week over the last N months?
- What is the trend of incomplete To-Do entries over the last N months?
- How is the resource utilization?
- Which tasks take most amount of time?
- Most/least productive staff members?

Page	Contains
Summary	<ul style="list-style-type: none"> • Breakdown by Role • Breakdown by Type • Breakdown by Priority • Breakdown by Division • Breakdown by Day of Week
Trends	<ul style="list-style-type: none"> • To-Do Type Trend • Priority Trend • Average Completion Duration • Ageing Analysis
Ranking	<ul style="list-style-type: none"> • Top N Tasks With Highest Completed To-Do Entries • Top N Tasks with Highest Completion Duration • Most Productive Staffs • Least Productive Staffs • Top N Users