# Oracle Financial Services Revenue Management and Billing

Version 6.0.0.0.0

## Release Notes

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**Note:** To improve the content readability, the Oracle Financial Services Revenue Management and Billing product is referred to as Oracle Revenue Management and Billing throughout this document.

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**Document Category:** Public

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# About this Document

This document describes the new features, enhancements, user interface and database level changes, supported platforms, framework upgrade, supported upgrades, and technology upgrade made in this release. It also highlights the discontinued features, bug fixes, and known issues in this release.

This document does not describe the functionality of Oracle Revenue Management and Billing or technical know-how on how to install or upgrade Oracle Revenue Management and Billing. For more detailed information, you can refer to the following documents:

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Licensing Guide* | Lists different features which you can use when you acquire a license for the following products:<br>• Oracle Financial Services Revenue Management and Billing<br>• Oracle Insurance Revenue Management and Billing<br>It also provides the licensing information about the third-party JARs and components which are included in the above-mentioned products. |
| *Oracle Revenue Management and Billing Quick Installation Guide* | Provides information about the media packs which are available for the current release. It contains information about the supported platforms, space requirements, and release-specific documentation library. In addition, it contains high-level information on how to install ORMB and selected additional software. |
| *Oracle Revenue Management and Billing Installation Guide* | Provides an overview about the application architecture. It contains detailed information about the software and hardware requirements, supported platforms, application server and database space requirements, and application server pre-requisites for supported platforms. It explains the installation and configuration menu options which are available during installation and advanced menu options which are available post installation. It also explains how to configure WebSphere application server and how to install OUAF, OUAF rollup packs, ORMB, and ORMB patches or rollup packs.<br>It contains appendices which lists ORMB rollup packs and notices about third-party JAR and other components. |

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Database Administrator's Guide* | Provides information about the supported database platforms and explains how to install database with or without demo data. It contains the standards and conventions that should be followed while working with ORMB database. In addition, it lists various configurations and implementation guidelines with respect to tablespace, encryption, storage, compression, indexes, initialization parameters, listener, table partitioning, performance monitoring, memory resource management, optimizer statistics and segment advisors, etc.<br>It contains various appendices which lists the new objects added in ORMB, application services configured for default user groups, new objects added in OUAF, information about OUAF system tables and ORMB rollup packs, notices about third-party JAR and other components. |
| *Oracle Revenue Management and Billing Security Guide* | Highlights what's new in security! Describes all the security features available in ORMB for authentication, authorization, user access, database access, LDAP and SSO integration, audit, encryption, web services, and JNDI access. It also describes how to provide support for data masking, Oracle cloud object storage, groovy, HTTP proxy, keystore, truststore, whitelist, federated architecture, and object erasure. In addition, it explains how to garble the customer information. |
| *Oracle Revenue Management and Billing Server Administration Guide* | Provides detailed information about the product architecture, native support, directory structures, environment variables, logs, etc. It explains various concepts related to the batch server and lists and describes the scripts required for installing and configuring ORMB. It explains how to monitor the system and configure Web browser, Web application server, business application server, inbound web services, and batch server. It explains how to provide Oracle Cloud Support and how to integrate and monitor Oracle Scheduler.<br>It contains various appendices which lists and describes the parameters available in the ENVIRON.INI, Web.xml, spl.properties, hibernate.properties, submitbatch.properties, threadpoolworker, coherence-cache.config.xml, and tangosol-coherence-override.xml files. |

 

| Document Name | Description |
|---|---|
| *Oracle Utilities Application Framework Business Process Guide* | Explains how to get acquainted with the user interface. It explains the different types of pages or portals that you may come across in the application. It explains how to set the user preferences and how to create, manage, assign, and complete a To Do in the application. It also explains how to submit reports and view historic reports in the application. |
| *Oracle Utilities Application Framework Administrative Guide* | Explains the general, security, user, designing, developing, and scripting options available in Oracle Utilities Application Framework (OUAF). It describes the user interface, database, configuration, and reporting tools available in OUAF. In addition, it provides information on how to configure incoming and outgoing messages and how to integrate Lightweight Directory Access Protocol (LDAP), Oracle Identity Manager (OIM), and Batch Scheduler with Oracle Revenue Management and Billing (ORMB). |
| *Oracle Revenue Management and Billing Business Process Guide* | Explains how to maintain the demographic, geographic, and financial objects (i.e. accounts) of a customer. It explains how to manage a customer's bills, payments, adjustments, credits, collections processing, statements and deposits in Oracle Revenue Management and Billing (ORMB). It also describes the financial transactions, case management, sales and marketing functions, rates engine, quotations, loans, how to monitor and execute job streams, and how to manage workflows, notifications, and overdue processing. In addition, it explains how to extract the data from the system using an extract template.<br>The features listed and described in this document can be used in both financial services and health insurance domains. |
| *Oracle Revenue Management and Billing Administrative Guide* | Explains how to configure various features and functionalities in Oracle Revenue Management and Billing (ORMB). For example, billing, payments, adjustments, financial transactions, credits, collections processing, loans, service credits, background processes, quotations, case management, security, overdue processing, batch scheduler, workflow, and notifications, etc.<br>The information available in this document can be used in both financial services and health insurance domains. |

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Banking User Guide* | Describes various features which are available for the financial services business. For example, customer registration, customer 360° view, invoicing group, pricing management, multi-currency accounts, currency conversion, construct based billing and settlement, trial billing, product lifecycle management, subscription billing, mass pricing update, accrual, foreign exchange gain loss, transaction feed management, upload validated payment and adjustment data, freeze payments on notification, payment request, offset request, funding request, hold request, refund/write off request, dispute request, upload request, earnings credit rate, payment agreement request, invoice request, deal management, etc.<br>It describes all screens related to these features and explains how to perform various tasks related to the feature in the application. |
| *Oracle Revenue Management and Billing Upgrade Path Guide* | Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another. |
| *Oracle Revenue Management and Billing Upgrade Guide* | Explains how to upgrade the ORMB application server and database from one version to another. It also explains how to migrate the ORMB data from one version to another and describes the additional tasks that you need to perform after upgrading from one version to another.<br>It includes various appendices that contain information about new tables introduced in the current release, existing tables which are modified in the current release, dropped algorithms and algorithm types, dropped characteristic types, dropped algorithm parameters, dropped option types in feature configurations, ORMB rollup packs, and SQL statements used for data migration. |
| *Oracle Revenue Management and Billing Direct Database Upgrade Guide* | Explains how to directly upgrade the ORMB database from 2.5.0.1.0 or any later version to the current release. It also highlights any known issues during direct database upgrade and how to handle these issues in the database. |
| *Oracle Revenue Management and Billing Transaction Feed Management - Batch Execution Guide* | Explains the sequence in which the batches should be executed while performing various tasks in the Transaction Feed Management (TFM) module.<br>It provides detailed information about each TFM batch and its parameters. It also indicates the restart and multi-threading ability of each batch. In addition, it recommends values for various parameters which can be used for tuning batch performance as per the available hardware. |

 

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Batch Guide* | Provides detailed information about various batches which are used in different modules, such as billing, payments, financial transaction, pricing management, funding request, offset request, hold request, upload request, inbound message, payment agreement request, accruals, earnings credit rate, ILM, deferred revenue recognition, reconciliation, garbling, repricing, entity audit, statements, etc. It also contains information about the batch parameters and the batch restart and multi-threading abilities. |
| *Oracle Revenue Management and Billing Information Lifecycle Management (ILM) Implementation Guide* | Provides an overview of the Information Lifecycle Management (ILM) feature. It describes how to implement ILM for the Transaction Feed Management (TFM) and Billing modules. It also provides detailed information about the ILM batches and their parameters. |
| *Oracle Revenue Management and Billing FOP Reports Guide* | Explains how to extract data from the system using various FOP reports in Oracle Revenue Management and Billing. |
| *Oracle Revenue Management and Billing Chatbot Configuration Guide* | Explains how to integrate Oracle Digital Assistant (ODA) with Oracle Revenue Management and Billing. |
| *Oracle Revenue Management and Billing Chatbot User Guide* | Explains how to use the menu based Chatbot introduced in Oracle Revenue Management and Billing. |
| *Oracle Revenue Management and Billing ML Integration Guide* | Explains how to integrate Machine Learning (ML) with Oracle Revenue Management and Billing for anomaly detection. |

# Change Log

| Revision | Last Update | Updated Section | Comments |
|---|---|---|---|
| 1.1 | 08-Jan-2024 | General Data Export - Restrict Initial Export by Time | Updated Information |
| | | Characteristic Mapping Language Genericized | Updated Information |
| | | Extensions Dashboard Portal | Updated Information |
| | | Menu Item Configuration for Add Action | Updated Information |
| | | Digital Self Service Masquerading Using Key Ring | Updated Information |
| | | Support for Migration Requests F1-FrameworkAdmin and F1-SchemaAdmin | Updated Information |
| | | Application Viewer | Updated Information |
| | | Framework Upgrade | Added Section |
| | | Framework (Known Issues) | Added Section |

| Revision | Last Update | Updated Section | Comments |
|---|---|---|---|
| 1.2 | 15-Jan-2024 | Deal Pricing Management (Formerly Known as Deal Management) | Updated Information |
| | | Redwood User Experience | Added Section |
| | | Menu Item Search | Added Section |
| | | Customer 360° View | Added Section |

# 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.

 

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# Prerequisites

If a customer is already using the Transaction Feed Management feature and wants to upgrade to Oracle Revenue Management and Billing Version 6.0.0.0.0, then the customer needs to ensure the following (before upgrading):

- All bills generated in the system are in the **Complete** status. In other words, there should not be any bills in the **Pending** status. If there are any bills in the **Pending** status or if any billable charge (generated through TFM) is not yet billed, disaggregation and cancellation of transactions which are uploaded using 5.1.0.0.0 will not happen successfully.
- Transactions which are uploaded using 5.1.0.0.0 must not be in the **Initial Product Determined (INPD)** status. They can be in the **Uploaded (UPLD)**, **Invalid (INVL)**, **Error (EROR)**, **Completed (COMP)**, or **Cancelled (CNCL)** status.
- Equal to (=) or tilde (~) symbol is not used in any existing price item parameter code and value. Otherwise, erroneous results might occur.

 

# About this Release

Oracle Revenue Management and Billing Version 6.0.0.0.0 offers new features and enhancements only for the financial services domain and not for the health insurance domain. Therefore, this release notes contain new features and enhancements only with respect to the financial services domain.

# New Features (Specific to Financial Services)

This section describes the following new features added in this release which can be used in the financial services domain:


- Associate an Entity Hierarchy Relationship with Multiple Divisions
- Customer Hierarchy Icons in Deal Pricing Management
- Assign Deal to the Next Level for Approval Based on Revenue Variation
- Split the Deferred Deal Simulation Process
- Copy the Price Item, Hierarchy Entity, and Terms and Conditions Selection from a Referred Deal
- Consider Only Prospect Accounts of a Customer During Deal Simulation


## Associate an Entity Hierarchy Relationship with Multiple Divisions

Until now, you were able to associate an entity hierarchy relationship with only one division at a time. Now, you can associate an entity hierarchy relationship with multiple divisions. You can include a hierarchy entity in an entity hierarchy relationship only when the hierarchy entity is associated with all the divisions to which the entity hierarchy relationship is associated. Let us understand this with the help of an example. Let us assume that the following hierarchy entities exist in the system:

| Hierarchy Entity | Entity Level | Divisions |
|---|---|---|
| Cash Management | Level 1 | New England, Middle Atlantic |
| Payments | Level 2 | New England, Middle Atlantic, East North Central, East South Central, West South Central |
| e-Statements | Level 2 | New England, Middle Atlantic, Mountain, Pacific, West South Central |
| ACH Transfer | Level 3 | New England, Middle Atlantic, West South Central, East North Central |
| ACH Reversal | Level 3 | Middle Atlantic, East North Central, West North Central, South Atlantic |
| TWIST Statement | Level 3 | East North Central, West North Central, South Atlantic |
| CAMT Statement | Level 3 | New England |
| Lockbox Service | Level 3 | West South Central, East North Central |

 

Let us assume that an entity hierarchy relationship named H1 is associated with the New England and Middle Atlantic divisions. Now, if you want to include the hierarchy entities in the H1 entity hierarchy relationship, you can only associate those hierarchy entities that are associated with the divisions to which the H1 entity hierarchy relationship is associated. In this case, you can include the following hierarchy entities in the H1 entity hierarchy relationship at the above-mentioned levels:

- Cash Management
- Payments
- e-Statements
- ACH Transfer

# Customer Hierarchy Icons in Deal Pricing Management

Oracle Revenue Management and Billing provides the ability to distinguish the level in the customer hierarchy at which the deal is created. The following icons are newly introduced in this release:

| Icon | Purpose |
|---|---|
|  | Indicates that the person is an independent person and does not belong to any customer hierarchy. |
|  | Indicates that the person is the parent person (i.e. the person at the highest level) in the customer hierarchy. |
|  | Indicates that the person is at the middle layer (i.e. the person has a parent person and one or more child persons) in the customer hierarchy. |
|  | Indicates that the person is the child person (i.e. the person at the lowest level) in the customer hierarchy. |

These icons will help the relationship manager and the deal approvers to understand the level in the customer hierarchy at which the deal is created. The system displays the above hierarchy icons corresponding to the records when you search for an existing customer for whom you want to create a new deal. This helps to clearly relate at which level in the customer hierarchy the deal will be created. Note that these icons appear only when you search using the **Customer Details** option from the **Search By** list in the **Search Entity** zone.

In addition, the system displays the above hierarchy icons in the **Entity Hierarchy** section when you are viewing the details of a deal that is created for an existing customer.

 

# Assign Deal to the Next Level for Approval Based on Revenue Variation

Until now, if the **Assign Only If In Range** field in the respective deal type was set to **Yes**, the system used to assign the deal to the next level in the approval hierarchy only if the profitability, profit variation, and/or revenue of the deal was within the specified range limit of the next level. Now, in addition, you can use the following two attributes while defining a criteria for each approval level in the approval hierarchy:

- Minimum Revenue Variation
- Maximum Revenue Variation

Note that you can specify the minimum and maximum revenue variation only in percentage and not in flat amount. Let us assume that the following criteria is defined for different levels in a deal approval profile:

| Approval Level | Criteria Sequence | Minimum Profit Variation (%) | Maximum Profit Variation (%) | Minimum Revenue Variation (%) | Maximum Revenue Variation (%) | Operator |
|---|---|---|---|---|---|---|
| Level 0 | 10 | 11 | 30 | 11 | 30 | AND |
| Level 1 | 10 | 31 | 60 | 31 | 60 | AND |
| | 20 | 0 | 10 | 0 | 10 | AND |
| Level 2 | 10 | -99999 | 0 | -99999 | 0 | OR |
| | 20 | 61 | 99999 | 61 | 99999 | OR |

While simulating the deal, the system checks whether the criteria of Level 0 (i.e. relationship manager) is satisfied. It executes the criteria with sequence 10. As the criteria operator of the respective sequence is set to **AND**, the system checks the following:

- Whether the deal profit variation is within the 11-30 range
- Whether the deal revenue variation is within the 11-30 range

If both the above conditions are met, the deal is automatically approved by the relationship manager. However, if both the conditions are not met, the relationship manager (at Level 0) sends the deal to the next level for approval. The system checks whether the criteria of Level 1 is satisfied. It first executes the criteria with sequence 10. As the criteria operator of the respective sequence is set to **AND**, the system checks the following:

- Whether the deal profit variation is within the 31-60 range
- Whether the deal revenue variation is within the 31-60 range

 

If both the above conditions are met, the system assigns the deal to the users of Level 1 for approval. However, if both the conditions are not met, the system executes the criteria with the subsequent sequence. As the criteria operator of the subsequent sequence is set to **AND**, the system checks the following:

- Whether the deal profit variation is within the 0-10 range
- Whether the deal revenue variation is within the 0-10 range

If both the above conditions are met, the system assigns the deal to the users of Level 1 for approval. But, if both the above conditions are not met, the system checks whether the criteria of Level 2 is satisfied. It first executes the criteria with sequence 10. As the criteria operator of the respective sequence is set to **OR**, the system checks the following:

- Whether the deal profit variation is within the -99999-0 range
- Whether the deal revenue variation is within the -99999-0 range

If either of the above conditions is met, the system assigns the deal to the users of Level 2 for approval. However, if both the conditions are not met, the system executes the criteria with the subsequent sequence. As the criteria operator of the subsequent sequence is set to **OR**, the system checks the following:

- Whether the deal profit variation is within the 61-99999 range
- Whether the deal revenue variation is within the 61-99999 range

If either of the above conditions is met, the system assigns the deal to the users of Level 2 for approval. But, if both the above conditions are not met, the deal is not assigned to any level for approval.

**Points to Note:**

If you do not specify any value in the **Minimum Profitability**, **Maximum Profitability**, **Minimum Profit Variation (%)**, **Maximum Profit Variation (%)**, **Minimum Revenue Amount**, **Maximum Revenue Amount**, **Minimum Revenue Variation(%)**, or **Maximum Revenue Variation (%)** field while defining a criteria for an approval level, the system will set its value to 0.

If both the minimum and maximum fields are set to zero, the system does not validate the financial summary against the respective minimum and maximum range and considers that the financial summary is within the minimum and maximum range.

# Split the Deferred Deal Simulation Process

Until now, the **C1_SMLD** batch considered all deals which are in the **Simulation Deferred** status and calculated the cost, profit, revenue, profitability (%), and profit variation (%) for the respective deal version. The way this batch was designed to work resulted in long batch processing time. To improve the batch performance, we have done the following:

- Introduced a new status named **Person Simulation Deferred** in the lifecycle of the **C1-DEAL** business object.
- Split the deferred deal simulation process into the following two batches:
    - **Simulation Batch For Account** (**SMLDA**)
    - **Simulation Batch For Person** (**SMLDP**)

  Note that you need to execute the above two batches in the following sequence:

  1. SMLDA
  2. SMLDP

The **Simulation Batch For Account (SMLDA)** batch is used to monitor or check whether there is any deal in the **Simulation Deferred** status. It considers only those deals where the simulation type is set to **Account** or **Customer**. If there is a deal in the **Simulation Deferred** status, the system considers its deal version which is in the **Simulation Deferred** status. It then does the following:

- Calculates the average price for the selected price items in the price item hierarchy.
- Calculates the original, proposed, standard (if the **Standard Pricing Comparison** option in the respective deal type is set to **Y**), and recommended (if the deal approver has recommended a pricing or commitment) cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) for the accounts in the deal. Note that it calculates the above statistics for only those accounts where the **SIML_REQD_FLG** column is set to **Y**.
- If the simulation type of the deal is set to **Account**, the system calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the deal level. If the division and/or product level approval is required, this batch calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the division and/or product level, respectively. Finally, the status of the deal is changed to **Simulated**.

At the end, the **C1-DSAOPR** algorithm attached to the **Post-Processing** system event of the **SMLDA** batch is executed. If the simulation type of the deal is set to **Customer**, this algorithm checks whether all the accounts (where the simulation is required) of the person are successfully simulated. If so, it changes the status of the deal to **Person Simulation Deferred**.

 

This batch is a multi-threaded batch. The multi-threading is based on account ID and chunks for multi-threading are created based on numerical distribution of account ID. You can specify the following parameters while executing this batch:

| Parameter Name | Mandatory (Yes or No) | Description |
|---|---|---|
| Deal ID | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of a particular deal. |
| Model ID | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of a particular deal version. |
| Division | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of the deals which belong to a particular division. |
| Thread Pool Name | No | Used to specify the thread pool on which you want to execute the batch. |

The **Simulation Batch For Person (SMLDP)** batch is used to monitor or check the following:

- Whether there is any deal in the **Simulation Deferred** status where the simulation type is set to **Deal**
- Whether there is any deal in the **Person Simulation Deferred** status where the simulation type is set to **Customer**

If so, the batch considers its deal version which is in the **Simulation Deferred** or **Person Simulation Deferred** status. It then does the following:

- Calculates the original, proposed, standard (if the **Standard Pricing Comparison** option in the respective deal type is set to **Y**), and recommended (if the deal approver has recommended a pricing or commitment) cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) for the customer and its child persons in the deal. Note that it calculates the above statistics for only those persons where the **SIML_REQD_FLG** column is set to **Y**.
- If the simulation type of the deal is set to **Deal** and the person is successfully simulated, the system calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the deal level. If the division and/or product level approval is required, this batch calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the division and/or product level, respectively. Finally, the status of the deal is changed to **Simulated**.

 

At the end, the **C1-DSPOPR** algorithm attached to the **Post-Processing** system event of the **SMLDP** batch is executed. If the simulation type of the deal is set to **Customer**, this algorithm checks whether all the persons (where the simulation is required) of the deal are successfully simulated. If so, the system calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the deal level. If the division and/or product level approval is required, this batch calculates the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the division and/or product level, respectively. Finally, the status of the deal is changed to **Simulated**.

This batch is a multi-threaded batch. The multi-threading is based on person ID and chunks for multi-threading are created based on numerical distribution of person ID. You can specify the following parameters while executing this batch:

| Parameter Name | Mandatory (Yes or No) | Description |
|---|---|---|
| Deal ID | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of a particular deal. |
| Model ID | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of a particular deal version. |
| Division | No | Used when you want to calculate the cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) of the deals which belong to a particular division. |
| Thread Pool Name | No | Used to specify the thread pool on which you want to execute the batch. |

We recommend you use the above two batches instead of the **Deal Simulation** (**C1_SMLD**) batch whenever you want to simulate the deals that are created for the customers with large hierarchies in the deferred mode.

# Copy the Price Item, Hierarchy Entity, and Terms and Conditions Selection from a Referred Deal

Now, the system copies the following when you opt to refer a deal using the **Deal** option from the **Search By** list of the **Select Reference** zone:

- Hierarchy entity and price item selection from the referred deal
- Terms and Conditions selection at the price item level from the referred deal
- Terms and Conditions selection at the hierarchy entity level from the referred deal
- Terms and Conditions selection at the deal level from the referred deal
- Default and edited versions of the terms and conditions at the deal, price item, and hierarchy entity levels
- Adhoc terms and conditions at the deal, price item, and hierarchy entity levels

 

For example, let us assume that the following hierarchy entities and price items are selected in the D1 deal:

| Hierarchy Entity Level 1 | Hierarchy Entity Level 2 | Price Item | Check Box Selected (Y or N) |
|---|---|---|---|
| HE01 | - | - | Y |
| | HE02 | - | Y |
| | | PI1 | Y |
| | | PI2 | N |
| | HE03 | - | Y |
| | | PI4 | Y |
| | | PI5 | N |
| | HE04 | - | N |
| | | PI6 | N |
| | | PI7 | Y |

Now, if you refer the D1 deal using the **Deal** option while creating the D2 deal, the system will copy all the hierarchy entities and price items with the above selections from the referred deal (i.e. D1).

Similarly, let us assume that the following terms and conditions are selected at different levels in the D1 deal:

| Level | Terms and Conditions | Terms and Conditions Category | Check Box Selected (Y or N) |
|---|---|---|---|
| Deal | T1 | Default | Y |
| Deal | T2 | Default | N |
| Deal | T3 | Overridden | N |
| Deal | T4 | Overridden | Y |
| Deal | T5 | Adhoc | Y |
| Deal | T6 | Adhoc | Y |
| Price Item | T4 | Default | Y |
| Price Item | T5 | Default | N |
| Price Item | T6 | Overridden | N |
| Price Item | T7 | Overridden | Y |
| Price Item | T8 | Adhoc | Y |
| Price Item | T9 | Adhoc | N |
| Hierarchy Entity | T10 | Default | Y |

| Level | Terms and Conditions | Terms and Conditions Category | Check Box Selected (Y or N) |
|---|---|---|---|
| Hierarchy Entity | T11 | Default | N |
| Hierarchy Entity | T12 | Overridden | N |
| Hierarchy Entity | T13 | Overridden | Y |
| Hierarchy Entity | T14 | Adhoc | Y |
| Hierarchy Entity | T15 | Adhoc | N |

Now, if you refer the D1 deal using the **Deal** option while creating the D2 deal, the system will copy all the default, overridden, and adhoc terms and conditions along with the selections from the referred deal (i.e. D1).

# Consider Only Prospect Accounts of a Customer During Deal Simulation

Until now, the system enabled you to add prospect accounts for an existing customer. Now, you can include only prospect accounts of a customer while creating a deal for an existing customer.

Earlier, the **Include Hierarchy** option was available while creating a deal for an existing customer. Now, instead, the **Accounts to include in Simulation** field is available while creating a deal for an existing customer. Note that the **Accounts to include in Simulation** field appears only when the simulation type of the deal is set to **Customer**. The **Accounts to include in Simulation** list contains the following options:

- **All Accounts in the Hierarchy** – Used when you want to consider all the accounts of the customer, its child persons, and the child persons' accounts in the deal.
- **Accounts of this Customer** – Used when you want to consider only the accounts (including the existing and prospect accounts) of the customer in the deal.
- **Only Prospect Accounts of this Customer** – Used when you want to consider only the prospect accounts of the customer in the deal.

The **Accounts to include in Simulation** field is not mandatory. If you do not specify the value for the **Accounts to include in Simulation** field, the system, by default, sets its value to **All Accounts in the Hierarchy**.

While creating a deal for a prospect person where the simulation type is set to **Customer**, the **Accounts to include in Simulation** field is not shown on the user interface. But, the system, by default, sets the value of the **Accounts to include in Simulation** field to **All Accounts in the Hierarchy**.

 

# Enhancements (Specific to Financial Services)

This section lists the enhancements made to the following features which can be used in the financial services domain:


- Entity Hierarchy Relationship
- Deal Pricing Management (Formerly Known as Deal Management)
- Deal Pricing Management through Inbound Web Services
- Billing Anomaly Detection
- Chatbot
- Data Extractor
- Customer 360° View


## Entity Hierarchy Relationship

The following changes are made to the Entity Hierarchy Relationship feature:

- Now, if you search for an entity hierarchy relationship that is associated with multiple divisions using the **Hierarchy**, **Description**, **Start Date** or **End Date** field in the **Search Hierarchy** zone, the system displays all the records of the entity hierarchy relationship with different divisions (to which it is associated) in the **Search Results** section.
- You will come across the following changes while defining or editing an entity hierarchy relationship:
    - A new section named **Divisions** is available in the **Entity Hierarchy Relationship** screen. It allows you to associate the entity hierarchy relationship with one or more divisions.
    - The **Entity Level** and **Hierarchy Entity** fields are moved from the **Main** section to the **Hierarchy Details** section.
    - While searching for a hierarchy entity at any level in the **Entity Hierarchy Relationship** screen, the system will fetch only those hierarchy entities that are associated with the divisions to which the entity hierarchy relationship is associated.
- Now, a new zone named **Divisions** is available while viewing the details of an entity hierarchy relationship in the **Entity Hierarchy Relationship** screen. It displays all the divisions to which the entity hierarchy relationship is associated.

## Deal Pricing Management (Formerly Known as Deal Management)

The following changes are made to the Deal Pricing Management feature:

- The **Deal Management** feature is renamed to **Deal Pricing Management** throughout the documentation. This feature in ORMB is renamed to clarify that it is only related to the deal pricing and not related to the overall operations involved in the deal management.

- Now, while creating a deal for an existing customer, the system indicates whether the person is an independent person or belongs to any level in the customer hierarchy using a set of hierarchy icons. The hierarchy icons appear only when you search for an existing customer using the **Customer Details** option from the **Search By** list in the **Search Entity** zone. For more information about the hierarchy icons, refer to the Customer Hierarchy Icons in Deal Pricing Management section.
- The system also displays the hierarchy icons corresponding to the persons in the **Entity Hierarchy** section when you are viewing the details of a deal that is created for an existing customer.
- Earlier, while defining a criteria for an approval level in the deal approval hierarchy, the system allowed you to specify a flat amount or a percentage value in the **Minimum Profit Variation** and **Maximum Profit Variation** fields depending on the profit variation type. Now, the **Profit Variation Type** field is removed from the **Approver Level Criteria** grid of the **Approval Hierarchy** section. You can only specify a percentage value in the **Minimum Profit Variation (%)** and **Maximum Profit Variation (%)** fields. Therefore, the field names are renamed accordingly.
- A new status named **Person Simulation Deferred** is introduced in the lifecycle of the **C1-DEAL** business object.
- Along with the cost, profit, revenue, profitability (%), and profit variation, the system also calculates the revenue variation (in percentage) for each selected price item, for each entity in the deal, and at the deal level. If the division and/or product level approval is required, the system also calculates the original, proposed, and standard revenue variation (%) at the division and/or product level, respectively.
- A new column named **SIML_REQD_FLG** is introduced in the **C1_PRS_PER** and **C1_PRS_ACCT** tables. If you edit or override a pricing or edit the proposed commitments of a price item for an account, the system will set the **SIML_REQD_FLG** column corresponding to the account, its main customer, and the parent persons in the customer hierarchy to **Y**. For example, let us assume you create a deal for a customer named P1 with the below hierarchy:

| Customer | Account | Parent Customer |
|---|---|---|
| P1 | A1 | - |
| | A2 | |
| P2 | A3 | P1 |
| | A4 | |
| P3 | A5 | P2 |
| | A6 | |
| P4 | A7 | P2 |
| | A8 | |

Now, if you edit or override the pricing or edit the proposed commitments of one or more price items assigned to the A5 account, the system will set the **SIML_REQD_FLG** column corresponding to A5, P3, P2, and P1 to **Y**. The system will then consider only those entities for simulation where the **SIML_REQD_FLG** column is set to **Y**. All other entities in the customer hierarchy will not be re-simulated.

 

If you edit or override a pricing or edit the proposed commitments of a price item for a person, the system will set the **SIML_REQD_FLG** column corresponding to the person, its child persons, and the parent persons in the customer hierarchy to **Y**. Considering the above example, if you edit or override the pricing or edit the proposed commitments of one or more price items assigned to the P2 customer, the system will set the **SIML_REQD_FLG** column corresponding to P2, P3, P4, and P1 to **Y**. The system will then consider only those entities for simulation where the **SIML_REQD_FLG** column is set to **Y**. All other entities in the customer hierarchy will not be re-simulated.

- Now, while simulating a deal for the first time, the system will do the following:
    - Calculates the cost, revenue, profit, profitability (%), profit variation (%), and revenue variation (%) for the selected price items in the price item hierarchy.
    - Calculate the average price for the selected price items in the price item hierarchy.
    - Calculate the original, proposed, and standard (if the **Standard Pricing Comparison** option in the respective deal type is set to **Y**) cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) for all the entities in the deal.
    - Set the **SIML_REQD_FLG** column corresponding to the entities in the deal to **N**.
    - Calculate the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the deal level.
    - If the division and/or product level approval is required, the system will calculate the original, proposed, and standard cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the division and/or product level, respectively.

  In other words, while simulating a deal for the first time, the system will only simulate the selected price items to derive the original and proposed financial summary for the deal.

  Whenever the relationship manager or the deal approver re-simulates the deal, the system will do the following:

    - Recalculate the cost, revenue, profit, profitability (%), profit variation (%), and revenue variation (%) for only those selected price items in the price item hierarchy whose pricing and/or commitments is modified.
    - Recalculate the average price for only those selected price items in the price item hierarchy whose pricing and/or commitments is modified.
    - Recalculate the proposed or recommended (if the deal approver has recommended a pricing or commitments) cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) for only those entities where the **SIML_REQD_FLG** column is set to **Y**.
    - Recalculate the proposed or recommended cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the deal level.
    - If the division and/or product level approval is required, the system will recalculate the proposed or recommended cost, profit, revenue, profitability (%), profit variation (%), and revenue variation (%) at the division and/or product level, respectively.

  In other words, while restimulating a deal, the system will only simulate those selected price items in the price item hierarchy whose pricing and/or commitments is modified.

 

- Earlier, whenever a deal approver returned the deal to the submitter, the relationship manager had to re-simulate the deal before sending it again to the next level for approval. Now, it is not mandatory to re-simulate the deal unless the relationship manager updates the proposed pricing or commitments of a price item based on the reviewer comments.
- If you have included the **INCLUDE_HIERAR_SW** field in the **C1-DEALINFO** algorithm, you need to replace it with the **HIER_FILTER_FLG** field so that the deal information string is appropriately shown on the user interface.

# Deal Pricing Management through Inbound Web Services

The following changes are made to the Deal Pricing Management through Inbound Web Services feature:

- The **hierarchyFilterFlag** tag is newly introduced in the following inbound web services:
    - C1-DealREST
    - C1-Deal
    - C1-DealExtractREST
    - C1-DealExtract

  You can specify either of the following value in the **hierarchyFilterFlag** tag:

    - **HIPR** - Used when you want to consider all the accounts of the customer, its child persons, and the child persons' accounts in the deal.
    - **WHEP** - Used when you want to consider only the accounts (including the existing and prospect accounts) of the customer in the deal.
    - **WHPR** - Used when you want to consider only the prospect accounts of the customer in the deal.

  The system considers the value specified in the **hierarchyFilterFlag** tag only when you are creating a deal for an existing customer where the simulation type is set to **Customer**. However, while creating a deal for a prospect person where the simulation type is set to **Customer**, the system, by default, sets the value of the **hierarchyFilterFlag** tag to **HIPR**.

  The **hierarchyFilterFlag** tag is not mandatory. If you do not specify the value for **hierarchyFilterFlag** tag, the system, by default, sets its value to **HIPR**.

- The following tags are removed from the respective business service schema:

| Business Service | Parent Tag | Child Tag |
|---|---|---|
| C1-DealCreationUpdateIWS | <dealDetails> | <includeHierarchyFlag></includeHierarchyFlag> |
| C1-DealExtractionWebService | <dealDetails> | <includeHierarchyFlag></includeHierarchyFlag> |

- The following tags are newly added to the respective business service schema:

| Business Service | Parent Tag | Child Tag |
|---|---|---|
| C1-DealCreationUpdateIWS | <dealDetails> | <hierarchyFilterFlag></hierarchyFilterFlag> |
| C1-DealExtractionWebService | <dealDetails> | <hierarchyFilterFlag></hierarchyFilterFlag> |

 

# Billing Anomaly Detection

The following changes are made to the Billing Anomaly Detection feature:

- The **Anomaly Category** field is removed from the **Search Anomaly** zone of the **Diagnostic Central** screen.
- The options in the **Anomaly Reason** list change depending on the value that you select from the **Search By** list.
- The following options appear in the **Anomaly Reason** list when you select the **Account/Bill Level Anomaly** option from the **Search By** list:

| Anomaly Reason | Description |
|---|---|
| Amount Variation | Indicates that the bill anomaly is detected due to variation in the bill amount when compared with the historical data. |
| Price Item Mismatch | Indicates that the bill anomaly is detected due to the price item mismatch when compared with the historical data. |
| Bill Cycle Code Mismatch | Indicates that the bill anomaly is detected due to the bill cycle code mismatch when compared with the historical data. |
| Currency Code Mismatch | Indicates that the bill anomaly is detected due to the currency code mismatch when compared with the historical data. |
| Amount Variation and Price Item Mismatch : %1, %2 | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the price item when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BILL_AMT and PRICITEM.<br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Amount Variation and Bill Cycle Code Mismatch: %1, %2 | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the bill cycle code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BILL_AMT and BILL_CYC_CD.<br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Amount Variation and Currency Code Mismatch: %1, %2 | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the currency code when compared with the historical data. Here, %1 and %2 are |

 

| Anomaly Reason | Description |
|---|---|
| | variables. These variables are set to the following field names - BILL_AMT and CURRENCY_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Price Item and Bill Cycle Code Mismatch: %1, %2 | Indicates that the bill anomaly is detected due to mismatch in the price item and bill cycle code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - PRICITEM and BILL_CYC_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Price Item and Currency Code Mismatch: %1, %2 | Indicates that the bill anomaly is detected due to mismatch in the price item and currency code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - PRICITEM and CURRENCY_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Bill Cycle Code and Currency Code Mismatch: %1, %2 | Indicates that the bill anomaly is detected due to mismatch in the bill cycle code and currency code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BILL_CYC_CD and CURRENCY_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Amount Variation, Price Item and Bill Cycle Code Mismatch | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the price item and bill cycle code when compared with the historical data. |
| Amount Variation, Price Item and Currency Code Mismatch | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the price item and currency code when compared with the historical data. |
| Amount Variation, Bill Cycle Code and Currency Code Mismatch | Indicates that the bill anomaly is detected due to variation in the bill amount and mismatch in the bill cycle code and currency code when compared with the historical data. |

 

| Anomaly Reason | Description |
|---|---|
| Price Item, Bill Cycle Code and Currency Code Mismatch | Indicates that the bill anomaly is detected due to mismatch in the price item, bill cycle code, and currency code when compared with the historical data. |
| Bill Anomaly Detected | Indicates that the bill anomaly is detected due to any other reason other than the anomaly reasons mentioned above. |
| Anomaly in Bill Segment | Indicates that the bill anomaly is detected due to anomaly in any of its bill segment. |

- The following bill level anomaly reasons are removed from the **Anomaly Reason** list:
  - Data Mismatch: %1
  - Amount Variation and Data Mismatch: %1
  - Price Item Mismatch and Data Mismatch: %1
  - Amount Variation, Price Item Mismatch and Data Mismatch: %1
- The following options appear in the **Anomaly Reason** list when you select the **Bill Segment Level Anomaly** option from the **Search By** list:

| Anomaly Reason | Description |
|---|---|
| BSEG Amount Variation | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount when compared with the historical data. |
| SQI Variation: %1 , %2 , %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br>**Points to Note:**<br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br>If the anomaly is resulted due to multiple SQIs, the system sets %1, %2, and %3 to three different SQIs which have highly contributed to the anomaly. |
| Pricing Change | Indicates that the bill segment anomaly is detected due to change in the pricing when compared with the historical data. |

 

| Anomaly Reason | Description |
|---|---|
| Bill Cycle Code Mismatch | Indicates that the bill segment anomaly is detected due to mismatch in the bill cycle code when compared with the historical data. |
| Currency Code Mismatch | Indicates that the bill segment anomaly is detected due to mismatch in the currency code when compared with the historical data. |
| BSEG Amount and SQI Variation: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and SQIs when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers two different SQIs which have highly contributed to the anomaly. |
| BSEG Amount Variation and Currency Code Mismatch: %1, %2 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and mismatch in the currency code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BSEG_AMT and CURRENCY_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| BSEG Amount Variation and Bill Cycle Code Mismatch: %1, %2 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and mismatch in the bill cycle code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BSEG_AMT and BILL_CYC_CD.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |

 

| Anomaly Reason | Description |
|---|---|
| BSEG Amount Variation and Pricing Change: %1, %2 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and change in the pricing when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BSEG_AMT and PRICE_ASGN_ID.<br><br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| SQI Variation and Bill Cycle Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs and mismatch in the bill cycle code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BILL_CYC_CD and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers two different SQIs which have highly contributed to the anomaly. |
| SQI Variation and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs and mismatch in the currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - CURRENCY_CD and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration. |

 

| Anomaly Reason | Description |
|---|---|
| | If the anomaly is resulted due to multiple SQIs, the system considers two different SQIs which have highly contributed to the anomaly. |
| SQI Variation and Pricing Change: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs and change in the pricing when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - PRICE_ASGN_ID and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br>**Points to Note:**<br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br>If the anomaly is resulted due to multiple SQIs, the system considers two different SQIs which have highly contributed to the anomaly. |
| Pricing Change and Bill Cycle Code Mismatch: %1, %2 | Indicates that the bill segment anomaly is detected due to change in the pricing and mismatch in the bill cycle code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - PRICE_ASGN_ID and BILL_CYC_CD.<br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Pricing Change and Currency Code Mismatch: %1, %2 | Indicates that the bill segment anomaly is detected due to change in the pricing and mismatch in the currency code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - PRICE_ASGN_ID and CURRENCY_CD.<br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |

 

| Anomaly Reason | Description |
|---|---|
| BSEG Amount Variation, SQI Variation and Bill Cycle Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and SQIs and mismatch in the bill cycle code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, BILL_CYC_CD, and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| BSEG Amount Variation, SQI Variation and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and SQIs, and mismatch in the currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, CURRENCY_CD, and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| BSEG Amount Variation, SQI Variation and Pricing Change: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and SQIs and change in the pricing when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, PRICE_ASGN_ID, and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25. |

| Anomaly Reason | Description |
|---|---|
| | **Points to Note:**<br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| BSEG Amount Variation, Bill Cycle Code and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount and mismatch in the bill cycle code and currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, BILL_CYC_CD, and CURRENCY_CD.<br>**Note:** The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| BSEG Amount Variation, Bill Cycle Code Mismatch and Pricing Change: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount, mismatch in the bill cycle code, and change in the pricing when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, BILL_CYC_CD, and PRICE_ASGN_ID.<br>**Note:** The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| BSEG Amount Variation, Currency Code Mismatch and Pricing Change: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the bill segment amount, mismatch in the currency code, and change in the pricing when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BSEG_AMT, CURRENCY_CD, and PRICE_ASGN_ID.<br>**Note:** The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |

 

| Anomaly Reason | Description |
|---|---|
| SQI Variation, Bill Cycle Code and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs and mismatch in the bill cycle code and currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BILL_CYC_CD, CURRENCY_CD, and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| SQI Variation, Pricing Change and Bill Cycle Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs, change in the pricing, and mismatch in the bill cycle code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - BILL_CYC_CD, PRICE_ASGN_ID and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25.<br><br>**Points to Note:**<br><br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br><br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br><br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| SQI Variation, Pricing Change and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to variation in the SQIs, change in the pricing, and mismatch in the currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - PRICE_ASGN_ID, CURRENCY_CD, and SQI_VAL1, SQI_VAL2, SQI_VAL3, SQI_VAL4, …, or SQI_VAL25. |

 

| Anomaly Reason | Description |
|---|---|
| | **Points to Note:**<br>The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution.<br>Each SQI_VAL represents the SQI_CD which has resulted in the anomaly. You can find the SQI_CD of the SQI_VAL using the **C1-BRSQCDMAP** feature configuration.<br>If the anomaly is resulted due to multiple SQIs, the system considers only one SQI which has highly contributed to the anomaly. |
| Pricing Change, Bill Cycle Code and Currency Code Mismatch: %1, %2, %3 | Indicates that the bill segment anomaly is detected due to change in the pricing and mismatch in the bill cycle code and currency code when compared with the historical data. Here, %1, %2, and %3 are variables. These variables are set to the following field names - PRICE_ASGN_ID, BILL_CYC_CD, and CURRENCY_CD.<br>**Note:** The %1, %2, and %3 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Bill Cycle Code and Currency Code Mismatch: %1, %2 | Indicates that the bill segment anomaly is detected due to mismatch in the bill cycle code and currency code when compared with the historical data. Here, %1 and %2 are variables. These variables are set to the following field names - BILL_CYC_CD and CURRENCY_CD.<br>**Note:** The %1 and %2 variables are set depending on the descending impact of the field resulting in the anomaly contribution. |
| Bill Segment Anomaly Detected | Indicates that the bill segment anomaly is detected due to any other reason other than the anomaly reasons mentioned above. |

- The following bill segment level anomaly reasons are removed from the **Anomaly Reason** list:
  - Data Mismatch: %1
  - BSEG Amount Variation,Data Mismatch: %1
  - SQI Variation,Data Mismatch: %1
  - BSEG Amount Variation,SQI Variation,Data Mismatch: %1

 

- Earlier, on clicking the **To Do** link in the **To Do Info** column while viewing the bill or bill segment level anomalies, the **To Do Entry** screen was displayed along with the details of the To Do. However, on clicking the related object link, you were not redirected to the **Diagnostic Central** screen. Now, the To Do ID is added in the related object information string. If you click the related object link, the **Diagnostic Central** screen appears along with the bill or bill segment level anomalies for which the To Do was created.
- The **Model Build Type** parameter is removed from the **C1-MLMCR** batch. Now, the **C1-MLMCR** batch will, by default, create the model and store it in the database.

# Chatbot

The following changes are made to the Chatbot feature:

- From 6.0.0.0.0 onwards, ORMB Chatbot “Billy” is enabled to support multi-lingual conversation. By default, you can converse with Billy in the following languages:
    - English
    - French
    - Spanish
    - Portuguese

  When you enter a command in any of the above supported language, Billy will respond in the respective language and all menus and menu options will appear in the respective language.

**Points to Note:**

If you want to change the language while conserving with Billy, you will have to either refresh the browser or logout and re-login to ORMB.

If you want to make some translation changes in the menus and menu options, you need to contact the ORMB AMS team for the required support.

- Now, after viewing the details of a customer using the customer ID in the **Customer 360° Information** screen, you can continue to view more details about the customer without losing the customer context. A new menu appears with the following menu options in the **Chatbot** window:
    - **Pricing Info** – Used when you to want to view the pricing information of the customer whose customer ID is already used in the current context.
    - **Another Customer Info** – Used when you want to view the details of another customer.
    - **Back to Main Menu** – Used when you want to navigate to the **Main Menu** options.
- Now, after viewing the details of a customer using the customer name in the **Customer 360° Information** screen, you can continue to view the details of another customer in the **Customer 360° Information** screen. A new menu appears with the following menu options in the **Chatbot** window:
    - **Another Customer Info** – Used when you want to view the details of another customer.
    - **Back to Main Menu** – Used when you want to navigate to the **Main Menu** options.
- Now, after viewing the details of an account using the account ID in the **Customer 360° Information** screen, you can continue to view more details about the account without losing the account context. A new menu appears with the following menu options in the **Chatbot** window:

 

  - **Pricing Info** – Used when you to want to view the pricing information of the account whose account ID is already used in the current context.
  - **Bill Info** - Used when you to want to view the details of a bill or create or cancel a bill of the account whose account ID is already used in the current context.
  - **Another Account Info** – Used when you want to view the details of another account.
  - **Back to Main Menu** – Used when you want to navigate to the **Main Menu** options.
- A new menu option named **Customer Identifier** is added to the **Customer Info** sub-menu. This enables you to view the details of a customer using its primary identifier.
- A new menu option named **Account Identifier** is added to the **Account Info** sub-menu. This enables you to view the details of an account using its primary identifier.
- Now, on clicking the **Account Statement** option from the **Account Info** sub menu, the following information about the last five financial transactions of the account is displayed:
  - Financial Transaction ID
  - Financial Transaction Type
  - FT Date
  - FT Amount
- Now, in the **Chatbot** window, all the dates are shown in the DD-MON-YYYY format.
- In the **Latest Bill Details** section, the **Dated** and **Due on** fields are renamed to **Bill Date** and **Due Date**, respectively.
- You will notice the following changes while viewing the information about the deals which are pending for approval:
  - Information about the deals is sorted based on the descending order of the revenue in the **Chatbot** window.
  - The **Show Next Records** option is removed, and the information of all deals is displayed at once in the **Chatbot** window. You can navigate between the information of different deals by clicking the **Next** and **Previous** icons.
  - The **More Details** option is removed, and the financial summary of the deal is displayed along with the deal details. The **Simulate**, **Send Deal for Approval**, **Approve**, **Return to Submitter**, and **Print Deal** options are also displayed in the **Deal Information** section.

# Data Extractor

The following changes are made to the Data Extractor feature:

- Until now, you were able to extract the data in the shared (@SHARED_DIR) and installed (@INSTALL_DIR) directories of the application. Now, to offer this feature on the ORMB Cloud Service Premium Edition environment, you can also extract the data in the buckets or containers within the Object Storage namespace. For example, if you are using an ORMB On Premise or Cloud Service environment, you can set the data extract directory path to @SHARED_DIR/data or @INSTALL_DIR/data. However, if you are using an ORMB Cloud Service Premium Edition environment, you can set the data extract directory path to file-storage://Extendable_lookup/Container.

 

# Customer 360° View

The following changes are made to the Customer 360° View feature:

- On selecting the **Default Hierarchy** option from the **Person Hierarchy** zone, you will notice the following changes:
    - The parent customer (if any) in the customer hierarchy is shown in the **Person Hierarchy** zone. Note that the system only lists the immediate parent customer of the person in its hierarchy.
    - The system displays the hierarchy icon corresponding to the persons that indicates whether the person is an independent person, parent person, person at the middle layer, or child person in the hierarchy. For more information about the hierarchy icons, refer to the Customer Hierarchy Icons in Deal Pricing Management section.
    - The parent customer's relationship with the child person is also shown in the parent customer's information string. For example, whether the parent customer is the owner, employer, etc.
    - The child person's relationship with the person is also shown in the child person's information string. For example, whether the child person is the subsidiary, TPA, etc.
    - Now, the system not only indicates whether there are agreed pricing for the person or account in the customer hierarchy, but also indicates the number of the agreed pricing available for the respective person or account in the customer hierarchy. A hyperlink appears on the information string in the **Agreed Pricing** column. On clicking the hyperlink, you can navigate to the **Pricing (Person)** or **Pricing (Account)** screen, respectively, where you can view the price assignments of the respective person and account.

# Framework Upgrade

Oracle Utilities Application Framework Version is upgraded from 4.5.0.0.0 to 4.5.0.1.1 in Oracle Revenue Management and Billing Version 6.0.0.0.0. For more information about the new features and enhancements introduced in Oracle Utilities Application Framework (OUAF) Version 4.5.0.1.1, refer to the Oracle Utilities Application Framework Version 4.5.0.1.1 Enhancements section. For more information about the deprecations made in Oracle Utilities Application Framework (OUAF) Version 4.5.0.1.1, refer to the Deprecation Notices for OUAF Version 4.5.0.1.1 section.

## Redwood User Experience

Oracle Revenue Management and Billing Version 6.0.0.0.0 is certified to use Oracle's Redwood user experience. By default, the value of the **User Interface Style** menu option (i.e. USER_INTERFACE_STYLE) is set to **REDWOOD** during the ORMB installation. The Old-style user experience (i.e. OPE) is no longer supported and should not be used anymore.

## Menu Item Search

The **Search** field in the **Application** toolbar allows you to search for a menu item to navigate directly to the corresponding page or BPA script rather than using the menus to navigate to the desired page or script. While searching for a menu item, you need to enter text starting with a slash "/" to indicate that the search is confined to menu items.

## Upgrade Impact

Until now, whenever the data of an array list (for example, entity characteristic list, entity division list, entity cost list, etc.) was updated, the system used to set the **actionFlag** attribute of the corresponding data element, all other data elements of the array list (irrespective of whether they are modified or not), and the array list to ‘C’. As a result, the system used to update all the data elements of the array list which degraded the system performance. Now, to address the performance issues while updating the data of an array list (for example, entity characteristic list, entity division list, entity cost list, etc.), the system will do the following:

- Set the **actionFlag** attribute of the data element that is modified in the array list to ‘C’
- Set the **actionFlag** attribute of all other data elements that are not modified in the array list to ‘NULL’
- Set the **actionFlag** attribute of the array list (i.e. at the root level) to ‘NULL’

This framework change has a major impact on the base and custom maintenance objects and business objects. Until now, the system considered the **actionFlag** attribute of the array list whenever a data element of an array list was updated. Now, the system will consider the **actionFlag** attribute of the data element that is updated in the array list. You will have to make the similar changes in the custom maintenance objects and business objects to ensure that the **actionFlag** attribute of the respective data element in the array list is considered whenever the data in an array list is updated.

 

# User Interface (UI) Level Changes

The following table lists changes made to the existing screens in Oracle Revenue Management and Billing:

| Screen Name (in 5.1.0.0.0) | Changes |
|---|---|
| Entity Hierarchy Relationship (Used for Adding and Editing) | The following changes are made to this screen:<br>• The **Division** field is removed from the **Main** section.<br>• The **Divisions** section is added to the **Entity Hierarchy Relationship** screen.<br>• The **Entity Level** and **Hierarchy Entity** fields are moved from the **Main** section to the **Hierarchy Details** section. |
| Entity Hierarchy Relationship (Used for Viewing) | The following changes are made to this screen:<br>• The **Division** field is removed from the **Main** section of the **Hierarchy** zone.<br>• The **Divisions** zone is added to the **Entity Hierarchy Relationship** screen. |
| Deal Information (Used for Creating a Deal) | The following changes are made to this screen:<br>• The hierarchy icons appear corresponding to the records when you search for an existing customer using the **Customer Details** option from the **Search By** list in the **Search Entity** zone.<br>• The **Include Hierarchy** option is removed from the **Main** section of the **Deal** zone. Instead, the **Accounts to include in Simulation** field is added in the **Main** section of the **Deal** zone. |
| Deal Information (Used for Viewing) | The following changes are made to this screen:<br>• The hierarchy icons appear corresponding to the persons in the **Entity Hierarchy** section when you are viewing the details of a deal that is created for an existing customer. |

| Screen Name (in 5.1.0.0.0) | Changes |
|---|---|
| Deal Approval Profile (Used for Adding and Editing) | The following changes are made to this screen:<br>• The **Profit Variation Type** column is removed from the **Approver Level Criteria** grid of the **Approval Hierarchy** section.<br>• The **Minimum Profit Variation** and **Maximum Profit Variation** columns in the **Approver Level Criteria** grid are renamed to **Minimum Profit Variation (%)** and **Maximum Profit Variation (%)**, respectively.<br>• The **Minimum Revenue Variation (%)** and **Maximum Revenue Variation (%)** columns are added to the **Approver Level Criteria** grid. |
| Deal Approval Profile (Used for Viewing) | The following changes are made to this screen:<br>• The **Approval Level Criteria** zone is renamed to **Deal Approval Hierarchy Criteria**.<br>• The **Profit Variation Type** column is removed from the **Deal Approval Hierarchy Criteria** zone.<br>• The **Minimum Profit Variation** and **Maximum Profit Variation** columns in the **Deal Approval Hierarchy Criteria** zone are renamed to **Minimum Profit Variation (%)** and **Maximum Profit Variation (%)**, respectively.<br>• The **Minimum Revenue Variation (%)** and **Maximum Revenue Variation (%)** columns are added to the **Deal Approval Hierarchy Criteria** zone. |
| Deal Dashboard | The following change is made to this screen:<br>• The **Person Simulation Deferred** option is added to the **Status** list in the **Search Deal** zone. |
| Deal Approver Dashboard | The following change is made to this screen:<br>• The **Person Simulation Deferred** option is added to the **Status** list in the **Search Deal** zone. |
| Diagnostic Central | The following changes are made to this screen:<br>• The **Anomaly Category** field is removed from the Search Anomaly zone.<br>• The options in the **Anomaly Reason** list change depending on the value that you select from the **Search By** list. |

 

# Database Level Changes

This section highlights the documents that you can refer for the following database level changes:


- New Objects in the ORMB V6.0.0.0.0 Database
- New Objects in the OUAF V4.5.0.1.1 Database
- New Tables in the ORMB V6.0.0.0.0 Database
- New Tables in the OUAF V4.5.0.1.1 Database
- Existing Tables Modified in ORMB V6.0.0.0.0
- Existing Tables Modified in OUAF V4.5.0.1.1
- Algorithms and Algorithm Types Dropped in ORMB V6.0.0.0.0
- Algorithms and Algorithm Types Dropped in OUAF V4.5.0.1.1
- Parameters Added or Removed from Algorithm Types in ORMB V6.0.0.0.0
- Option Types Added or Removed from Feature Configurations in ORMB V6.0.0.0.0
- Characteristic Types Dropped in ORMB V6.0.0.0.0
- Batch Controls Dropped in ORMB V6.0.0.0.0
- Parameters Added or Removed from Batch Controls in ORMB V6.0.0.0.0
- Parameters Added or Removed from Batch Controls in OUAF V4.5.0.1.1
- Default User Group Application Services


## New Objects in the ORMB V6.0.0.0.0 Database

To view the list of objects (such as tables, columns, algorithm types, business objects, and so on) which are newly introduced in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix A: New Objects in the Oracle Revenue Management and Billing V6.0.0.0.0 Database in the *Oracle Revenue Management and Billing Database Administrator's Guide*.

## New Objects in the OUAF V4.5.0.1.1 Database

To view the list of objects (such as tables, columns, algorithm types, business objects, and so on) which are newly introduced in Oracle Utilities Application Framework Version 4.5.0.1.1, refer to the Appendix D: New Objects in the Oracle Utilities Application Framework V4.5.0.1.1 Database in the *Oracle Revenue Management and Billing Database Administrator's Guide*.

## New Tables in the ORMB V6.0.0.0.0 Database

To view detail information about the tables that are newly introduced in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix C: New Tables Added in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# New Tables in the OUAF V4.5.0.1.1 Database

To view detail information about the tables that are newly introduced in Oracle Utilities Application Framework Version 4.5.0.1.1, refer to the Appendix M: New Tables Added in OUAF Version 4.5.0.1.1 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# Existing Tables Modified in ORMB V6.0.0.0.0

To view the columns that are newly added, modified, or dropped from the existing tables in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix D: Existing Tables Modified in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# Existing Tables Modified in OUAF V4.5.0.1.1

To view the columns that are newly added, modified, or dropped from the existing tables in Oracle Utilities Application Framework Version 4.5.0.1.1, refer to the Appendix N: Existing Tables Modified in OUAF Version 4.5.0.1.1 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# Algorithms and Algorithm Types Dropped in ORMB V6.0.0.0.0

To view the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix E: Algorithms and Algorithm Types Dropped in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# Algorithms and Algorithm Types Dropped in OUAF V4.5.0.1.1

To view the algorithms and algorithm types which are dropped in Oracle Utilities Application Framework Version 4.5.0.1.1, refer to the Appendix O: Algorithms and Algorithm Types Dropped in OUAF Version 4.5.0.1.1 in the *Oracle Revenue Management and Billing Upgrade Guide*.

# Parameters Added or Removed from Algorithm Types in ORMB V6.0.0.0.0

To view the parameters which are newly added or dropped from the existing algorithm types in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix F: Parameters Added or Removed from Algorithm Types in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide.*

 

# Option Types Added or Removed from Feature Configurations in ORMB V6.0.0.0.0

To view the option types which are newly added or dropped from the existing feature configurations in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix G: Option Types Added or Removed from Feature Configurations in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide.*

# Characteristic Types Dropped in ORMB V6.0.0.0.0

To view the characteristic types which are dropped in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix H: Characteristic Types Dropped in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide.*

# Batch Controls Dropped in ORMB V6.0.0.0.0

To view the batch controls which are dropped in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix I: Batch Controls Dropped in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide.*

# Parameters Added or Removed from Batch Controls in ORMB V6.0.0.0.0

To view the parameters which are newly added or dropped from the existing batch controls in Oracle Revenue Management and Billing Version 6.0.0.0.0, refer to the Appendix J: Parameters Added or Removed from Batch Controls in ORMB Version 6.0.0.0.0 in the *Oracle Revenue Management and Billing Upgrade Guide.*

# Parameters Added or Removed from Batch Controls in OUAF V4.5.0.1.1

To view the parameters which are newly added or dropped from the existing batch controls in Oracle Utilities Application Framework Version 4.5.0.1.1, refer to the Appendix P: Parameters Added or Removed from Batch Controls in OUAF Version 4.5.0.1.1 in the *Oracle Revenue Management and Billing Upgrade Guide.*

# Default User Group Application Services

Oracle Revenue Management and Billing provides the following default user groups - ALL_SERVICES, C1_BSERVICES, HCADMIN, and INADMIN. To view the application services configured for the default user groups, refer to the Appendix B: Application Services Configured for Default User Group in the *Oracle Revenue Management and Billing Database Administrator's Guide*.

 

# Supported Platforms

The following table lists the operating system and application server combinations on which Oracle Revenue Management and Billing Version 6.0.0.0.0 is supported:

| Operating System and Web Browser (Client) | Operating System (Server) | Chipset | Application Server | Database Server |
|---|---|---|---|---|
| Microsoft Windows 10 (64-bit) with Chromium Edge v108+, Mozilla Firefox ESR 102+, or Google Chrome Enterprise Version 108+<br>**Note:** Here, x represents the vendor supported version. | AIX 7.2 TL5+ (64-bit)<br>**Note:** Version numbers suffixed with "+" are the MINIMUM version supported. That version and all future 4th digit updates will be supported. | POWER 64-bit | Oracle WebLogic 12.2.1.4 (64-bit) | Oracle Database Server 19c |
| | Oracle Linux 8.x (64-bit) | x86_64 | Oracle WebLogic 12.2.1.4 (64-bit)<br>IBM WebSphere 9.0.5.6 | Oracle Database Server 19c |
| | Red Hat Enterprise Linux 8.x (64-bit)<br>**Note:** Oracle Revenue Management and Billing is tested and certified on Oracle Linux 8.x. Oracle Linux is 100% user space-compatible with Red Hat Enterprise Linux, and therefore Oracle Revenue Management and Billing is supported on Red Hat Enterprise Linux. | x86_64 | Oracle WebLogic 12.2.1.4 (64-bit)<br>IBM WebSphere 9.0.5.6 | Oracle Database Server 19c |

| Operating System and Web Browser (Client) | Operating System (Server) | Chipset | Application Server | Database Server |
|---|---|---|---|---|
| | Microsoft Windows Server 2016+ (64-bit) | x86_64 | Oracle WebLogic 12.2.1.4 (64-bit) | Oracle Database Server 19c |

**Points to Note:**

IBM WebSphere certification is pending for Oracle Revenue Management and Billing Version 6.0.0.0.0.

Microsoft Windows Server is not supported for the Production environments. We strongly recommend you install Oracle Revenue Management and Billing (ORMB) on Microsoft Windows platform only for non-production activities, such as User Acceptance Testing (UAT), development setup, and so on.

 

# Technical Recommendations

To improve the overall batch performance on Windows and Linux platforms, we recommend you to make changes in the following files:

| File Name | Change From | Change To |
|---|---|---|
| hibernate.properties | hibernate.c3p0.timeout = 300 | hibernate.c3p0.timeout = 600 |
| threadpoolworker.sh | MEM_ARGS="-Xms512m -Xmx1024m -XX:MaxPermSize=768m" | MEM_ARGS="-Xms512m -Xmx4096m -XX:MaxPermSize=768m" |

# Supported Upgrades

At present, we support upgrade from Oracle Revenue Management and Billing Version 5.1.0.0.0 to 6.0.0.0.0. For more information on how to upgrade, refer to the following documents which are available on OTN or OHC:

- *Oracle Revenue Management and Billing Version 6.0.0.0.0 Upgrade Path Guide*
- *Oracle Revenue Management and Billing Version 6.0.0.0.0 Upgrade Guide*

If you want to directly upgrade the Oracle Revenue Management and Billing database from 2.5.0.1.0 or any later version to 6.0.0.0.0, refer to the *Oracle Revenue Management and Billing Direct Database Upgrade from 2.5.0.1.0 to 6.0.0.0.0*. We recommend you follow the direct upgrade process while upgrading the ORMB database from 2.5.0.1.0 or any later version to 6.0.0.0.0 because it involves a smaller number of steps and saves time.

 

# Unsupported Integrations

We are not supporting Oracle Documaker integration with Oracle Revenue Management and Billing Version 6.0.0.0.0. Alternatively, you can configure the bill and letter reporting feature so that you can generate bills and letters of a customer in the PDF format from ORMB. This reporting feature is built using native capabilities available in ORMB. For more information about the reporting feature, refer to the following documents which are available on OTN or OHC:

- *Oracle Revenue Management and Billing Banking User Guide*
- *Oracle Revenue Management and Billing Bill and Letter Reports Configuration Guide*

# Oracle Utilities Application Framework Version 4.5.0.1.1 Enhancements

The following enhancements are made in Oracle Utilities Application Framework (OUAF) Version 4.5.0.1.1:


- Application Security Enhancements
- Product Usability Enhancements
- Data Export Enhancements
- To Do Management and Processing Enhancements
- Batch Processing Enhancements
- Implementation Tool Enhancements
- Content Migration Assistant (CMA) Enhancements
- Miscellaneous Enhancements


**Note:** The **Steps to Enable**, **Tips and Considerations**, **Key Resources**, and **Role Information** sections provide guidelines for enabling each feature, wherever applicable.

## Application Security Enhancements

This section describes the following new and enhanced application security features introduced in this release:


- Detailed Description Added to Application Service
- Screen Information Hidden on Session Timeout


### Detailed Description Added to Application Service

Detailed Description was added as an optional attribute for application services. For most product delivered application services, the **Secured Objects** zone, which highlights which metadata objects in the system are linked to the application service, provides enough information to security administrators for them to understand what features are controlled by this record. There are a small number of application services that are referenced from JavaScript or Java, which are not discoverable by the **Secured Objects** zone. For these types of application services, a detailed description helps provide more information about the purpose and use of the record. For these examples and any other use case where the product has determined that additional information is warranted, the detailed description for such application services includes a detailed description.

 

### Screen Information Hidden on Session Timeout

When a user's session times out, the underlying page is changed so that the underlying information is no longer visible. The user sees an alert that the session has timed out and they should click **OK** to log into the application again.

This ensures that possibly sensitive information is no longer visible.

## Product Usability Enhancements

This section describes the following new and enhanced product usability features introduced in this release:

- Algorithm Portal
- Application Security Query Portal
- Application Service Query Portal - Search by Release Version
- Characteristic Type Portal - Support Large Number of Characteristic Values
- Currency External Reference
- Currency Portal
- Dashboard Location Values Adjustment
- Display Icon Portal
- Geographic Type Portal
- Improved Field Portal
- Inbound Web Service Query Portal - Additional Search Options
- Language Portal
- Lookup Portal
- Menu Portal
- Online Help Opens in Oracle Help Center for Oracle Utilities Application Framework Based Applications
- Phone Type Portal
- Shortcut Key for Navigating Multiple Tabs Adjusted
- Unified Search Improvements
- User Group Portal
- Work List Zone - Improved Item Navigation

## Algorithm Portal

The **Algorithm** page has been converted to a portal, leveraging a more flexible and extendable user interface metaphor. The portal includes a **References** tab that list all entities associated with an algorithm. Knowing where an algorithm is used provides you with a better view of your custom rules and will help you target your testing. This portal improves efficiency for building and maintaining algorithms for developers without impacting extensions.

## Application Security Query Portal

While application security can be configured at the granular level of an application service and its access modes, it is more intuitive to review access rights to broader application components such as menu lines, dashboard zones, batch processes, and more. A new **Application Security Query** portal supports various options for reviewing this configuration across users, user groups, and various types of secured components. This portal improves efficiency for building and maintaining security without impacting customizations.

## Application Service Query Portal - Search by Release Version

The **Application Service Query** portal is enhanced to support a new query option that lists application service by the release they were introduced in. The recording of this information is only available from this release going forward, so it is only applicable to new application service going forward. This makes the uptake step of reviewing new application services easier. This change is transparent to customizations as it improves efficiency for building and maintaining security.

## Characteristic Type Portal - Support Large Number of Characteristic Values

The maintenance of the list of characteristic values for a pre-defined characteristic type has been moved to a separate zone on the portal rather than a list built into the main section. The new zone better handles use cases where a large number of characteristic values exist. The zone includes paging and supports filters for more easily finding and maintaining individual entries.

View and maintain characteristic values for a pre-defined characteristic type in a separate zone with filters and paging support.

 

## Currency External Reference

**Note:** This feature is only an infrastructure change, allowing for edge products or implementations to choose to add support for currencies that are more than three characters. There is no additional functionalityprovided by the product for this feature.

There is a new external reference column in the Currency table. This allows implementations to define currencies that use a currency code that is more than three characters. This may be required to support crypto currencies with codes of more than three characters. Internalization currencies and the product's current code field are still three characters.

Be aware of the following:

- The currency table still limits the primary key of currency code to three characters. To support a crypto currency with more than three characters, a unique Currency Code should be defined and the External Reference should be used to capture the recognized industry reference.
- References to the currency in product tables continues to use the three character unique currency code.
- Specific interfaces related to payments may need to be enhanced to support this feature. Contact your implementation team to confirm what customization are needed to handle larger currency references.

## Currency Portal

The **Currency** page has been converted from the "list" maintenance fixed page style to a portal-driven user interface page. An "all-in-one" metaphor is used, providing a list of the existing currency codes along with the standard ability to broadcast, edit, delete, duplicate, and add a new record.

The **Currency** page has been converted to a portal to provide you with a more flexible and extendable user experience.

## Dashboard Location Values Adjustment

The dashboard location values were adjusted to reflect the behavior in a right-to-left language. The values are now 'Before' and 'After', which reflect the location of the dashboard relative to the location of the main page display.

- If the user's language is 'left to right', then the value of 'Before' means the dashboard is on the left and the value of 'After' means the dashboard is on the right.
- If the user's language is 'right to left', then the value of 'Before' means the dashboard is on the right and the value of 'After' means the dashboard is on the left.

Previously, the values were 'Left' and 'Right' with the product behavior based on a 'left to right' language. For a user with a 'right to left' language, the product was reversing the order of the page, including the location of the dashboard. The updated values now reflect the behavior for both types of languages.

## Display Icon Portal

Maintain display icon information using a standard portal.

The **Display Icon Reference** page has been converted to a portal to provide you with a more flexible and extendable user experience.

The display icon reference page has been converted from the 'list' maintenance fixed page style to a portal-driven user interface page. It includes a query zone where you can search by the code or the description. The image of the icon is displayed in the results.

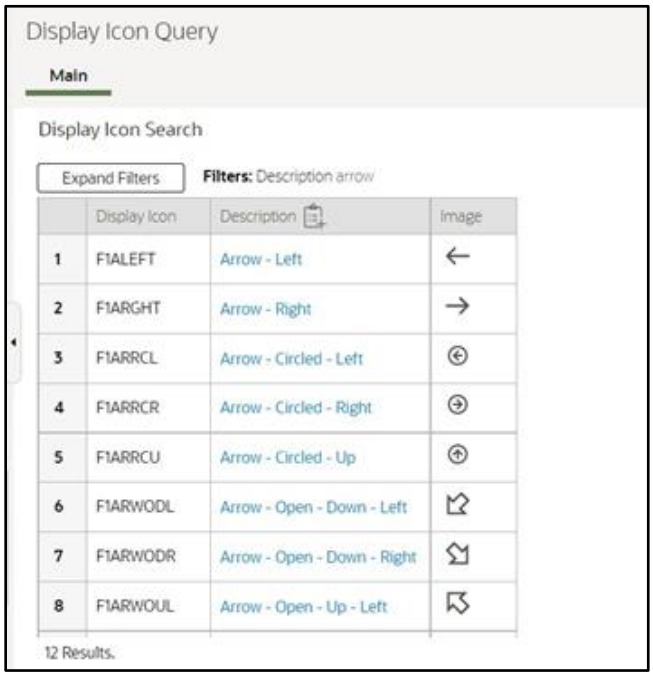


**Figure 1: Display Icon Query Screen**

Any page that includes a search for a display icon, such as Tree or Insight Type, uses the same query and also benefits from the enhancement to include the icon's image.

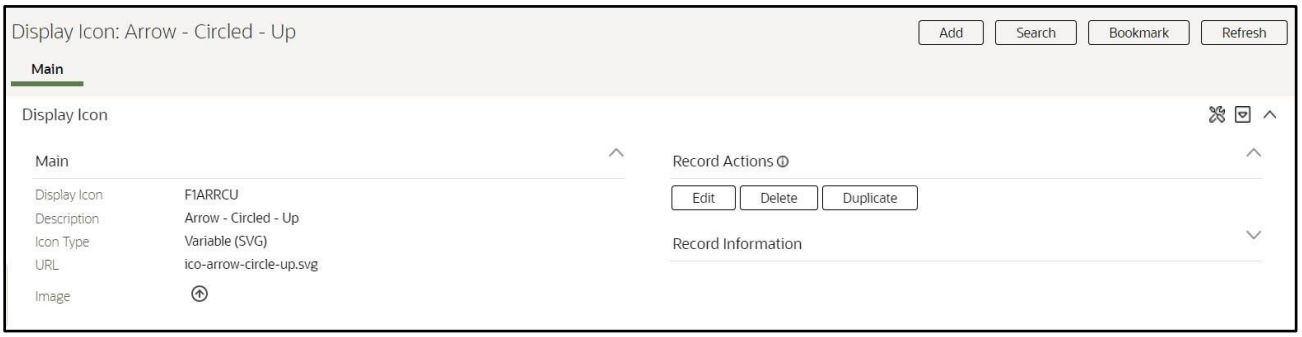


**Figure 2: Display Icon View Screen**

## Geographic Type Portal

The **Geographic Type** page has been converted to a portal to provide you with a more flexible and extendable user experience. An "all-in-one" metaphor is used, providing a list of the existing geographic types along with the standard ability to broadcast, edit, delete, duplicate, and add a new record. This portal improves productivity for adding and maintaining geographical types without impacting extensions.

## Improved Field Portal

The **Field** page can now add or update the corresponding lookup field record. The only remaining reason to navigate to the **Lookup** page is for deletion or revision control purposes. Before this release, defining a lookup field involved setting the lookup field itself in the **Lookup** page and then adding it again in the **Field** page. This provides you with a seamless experience to maintain lookup fields. It improves efficiency for developers without impacting customizations.

## Inbound Web Service Query Portal - Additional Search Options

The **Inbound Web Service Query** portal is enhanced to support search by information related to REST operations and help text configuration. This provides additional query options for searching inbound web services. This is transparent to customizations as it improves efficiency for building and maintaining inbound web services for developers.

## Language Portal

The **Language** page has been converted from a "list" maintenance fixed page style to a portal-driven user interface page. An "all-in-one" metaphor is used, providing a list of the existing language codes along with the standard ability to broadcast, edit, delete, duplicate, and add a new record.

The **Language** page has been converted to a portal to provide you with a more flexible and extendable user experience.

## Lookup Portal

The **Lookup** page has been converted to a portal, leveraging a more flexible and extendable user interface metaphor. The portal supports navigating to the corresponding field associated with the lookup. This makes it easier to access the information. This portal improves efficiency for building and maintaining lookups for developers without impacting extensions.

 

## Menu Portal

The **Menu** page has been converted from the fixed page style to a portal-driven user interface page. The **Menu** portal includes an **Application Security** tab for reviewing and configuration application security information for any of the menu lines.

This functionality was previously released on a separate **Menu Application Security** portal that was accessible via a dashboard zone associated with the fixed style menu page. With the conversion of the menu page to a portal, all menu configuration options, including application security setup, are provided in one place.

## Online Help Opens in Oracle Help Center for Oracle Utilities Application Framework Based Applications

Opening online help from a Framework-based application now brings you to the relevant documentation page in Oracle Help Center. This removes the need to manage and deploy the help engine used in past releases, and reduces the overall deployment times significantly.

You can use standard browser functions to bookmark pages and page headings, and use your browser's option to open the content in a new tab or open it in a new window. Note that because the help launches as a standard browser window, the default behavior is that it will open in a new tab in the same window. Once the help is launched, you can set in your browser to move the tab location or separate it to its own window as desired going forward. There were also some enhancements to the online help to make navigating the content easier.

## Phone Type Portal

The **Phone Type** page has been converted to a portal to provide you with a more flexible and extendable user experience. An "all-in-one" metaphor is used, providing a list of the existing phone types along with the standard ability to broadcast, edit, delete, duplicate, and add a new record. This portal improves productivity when adding or maintaining phone types without impacting extensions.

## Shortcut Key for Navigating Multiple Tabs Adjusted

The shortcut key for navigating from one tab of a page to the next tab on the same page is now **Alt+F2**. In the following example, if you are on the **Main** tab of the **User** page and wish to go to the **To Do Roles** tab, you could use **Alt+F2** to get there.

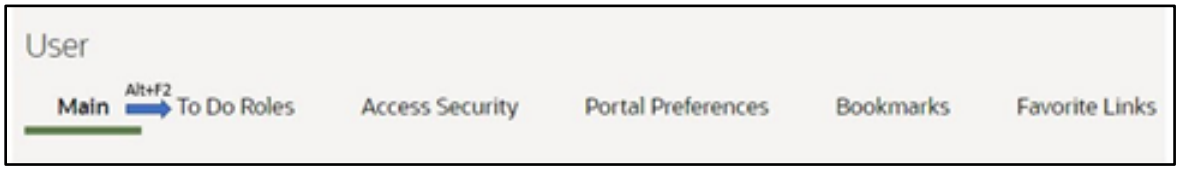


**Figure 3: Navigating to the Next Tab**

 

To go to the previous tab, use **Shift+Alt+F2**:


**Figure 4: Navigating to the Previous Tab**

Previously, the shortcut keys for this functionality were **F2** and **Shift+F2**, respectively. OJet uses **F2** for some of its keyboard navigation and since the product uses OJet widgets for base functionality like Trees and Insights, the shortcut keys were adjusted to be able to take advantage of the built-in OJet features.

## Unified Search Improvements

Previously, the Unified Search supported a single search option for a user. Now a user may switch between search options to which they have access. In addition, information about the current search option, which filters and hints it supports, and a recent search history, are all new features easily available to assist the user.

The unified search is enhanced to provide help on each filter and hint, and allow you to toggle between multiple search options you can access.

## User Group Portal

The **User Group** page was replaced with a standard query portal that supports additional search filters by application service and user.

The **User Group Maintenance** page was replaced with a standard portal with the ability to use mass actions to:

- Add and remove application services, both at the service and access mode levels.
- Add and remove users.
- Set the expiration data for application services and users.
- Configure security type authorization information.

You can also review application components that are secured by the user group. This is similar to the **Application Security Query** portal which was also introduced in this release.

## Work List Zone - Improved Item Navigation

The **Work List** zone is populated whenever you click the **Work List** icon in the header of a data explorer results list.

The following enhancements were made to the **Work List** zone:

- The entry that you are currently working on is marked with a star. Previously, a check was used for both the current entry and entries already visited. Now the check is only for the previously visited entries.


**Figure 5: Entry Marked with a Star in the Work List Zone**

- **Previous** and **Next** buttons allow you to move through the list without having to find the next entry to click.


**Figure 6: Previous and Next Buttons**

- You may actively mark a row to ignore when using the **Previous** and **Next** buttons. You can do this by clicking the column adjacent to that entry. Clicking this icon removes the indication and allows the entry to be included in the next/previous processing again.


**Figure 7: Removing the Indication of an Entry**

- If you have a long list, the zone keeps the current entry position in view even after refreshing the dashboard. Previously, any refresh of the zone would reposition the list to the top requiring you to scroll to find your current entry.

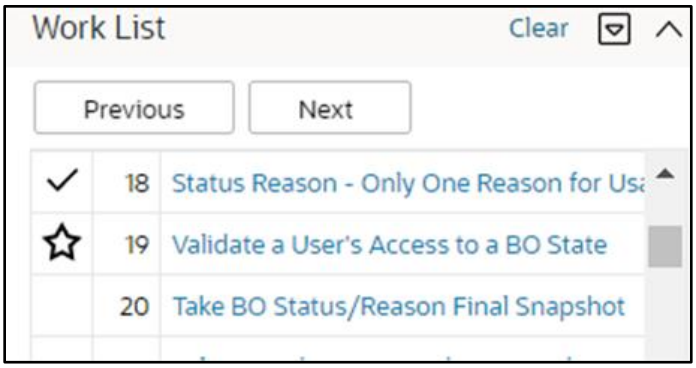


**Figure 8: Work List Zone**

# Data Export Enhancements

This section describes the following new and enhanced data export features introduced in this release:


- Data Redaction Rules
- General Data Export - Restrict Initial Export by Time
- Generalized Export Dashboard Portal Enhancements
- Generalized Data Export Support for Entity Log Records
- Generalized Data Export Support for Lost Ongoing Export Files


## Data Redaction Rules

Personal Identifiable Information (PII) that is not encrypted may require special handling when it is exported out of the application and written to files. Depending on how the export file is used, this type of information may need to be anonymize before being written to the file. Now, Generalized Data Export and Content Migration Assistant (CMA) batch processes support the anonymization of PII data based on customer- defined redaction rules.

A redaction rule defines the type of information that should be redacted, where it resides, and what function to apply to the value to anonymize it. For example, a phone number field may be redacted by applying a function that replaces all digits with 0. A library of common redaction functions is provided as an extendable lookup, and you may extend the list as needed. Sample redaction rules are provided as accelerator data, and you can update the rules as needed.

As a way of tracking and identifying fields that may contain sensitive information, a new searchable PII Class option now appears in the Field record definition.

The export tools were enhanced as follows:

- **Content Migration Assistant -**
    - By default, data redaction rules are applied to anonymize sensitiveinformation before it is written to the export file.
    - Depending on application security, you may indicate on a specific migration data set export request that data should be exported as it is (non-redacted). This option is only available to if you are provisioned with the "Do Not Apply Redaction Rules (NRDT)" access mode associated with the migrationdata set export's application service (F1MIGRDEXP).
- **Generalized Data Export Batch Processes** -
    - By default, data redaction rules are applied to anonymize sensitiveinformation before it is written to the export file.
    - A new batch parameter "Do Not Apply Redaction Rules" allows data to beexported as it is (non-redacted). The option requires that the user submittingthe batch process is provisioned with the "Do Not Apply Redaction Rules (NRDT)" access mode associated with the data export application service (F1-DATAEXPORT).

- Note that Generalized Data Export data export is a single stream of files that may be sent to multiple targets. You should review these integrations tobe sure they do not have conflicting redaction requirements.

Once redaction rules are defined in an environment, these processes will automaticallyanonymize data by default.

A new **Obfuscation Configuration** portal provides a consolidated view of all masking,encryption, and redaction rules.

## General Data Export - Restrict Initial Export by Time

By default, the initial export batch process exports the entire data for an entity. In some situations, typically around high volume historical data, there is a need to restrict the export to more recent data (for example, the last few months of data).

The initial export batch process now supports an optional batch parameter named "Restrict By Date" that allows implementation to constrain the history they export. The parameter references the date field to use and the requested time frame in terms of number of days prior to business date. Refer to the Generalized Initial Export Template (F1-GEIXP) batch control for more information.

Note that excluding records from export should be carefully considered as this may result in data discrepancies when the excluded data is referenced on other entities. Refer to online documentation for additional considerations when using this option.

The option is only applicable to specific entities that have a qualifying reference date and the time frame for export may vary for each customer. Therefore, the new parameter is not added to any base product Initial Export batch control aside of the template batch control for documentation purposes. Customers can clone the base product batch control for a specific entity and add the parameter to their custom version.

## Generalized Export Dashboard Portal Enhancements

When the list of entities to add or edit export settings for is too large, the transaction may time out. This situation often required the user to repeat the update in smaller batches. Now, by default, the application attempts to make the update in smaller batches. This minimizes timeout situations and makes them less problematic.

In addition, in some rare situations, the process to enable an entity for ongoing export may leave the entity not fully configured. Entities that are not fully configured are now explicitly highlighted as not configured, and they are listed at the top of the **Export Entities** zone. The user can then repeat the enablement action for these entities to resolve the problem.

 

### Generalized Data Export Support for Entity Log Records

By default, the Generalized Data Export batch process does not export maintenance object log tables due to performance and data volume considerations. Also, log records are omitted from export because they do not usually contain useful business information. However, there are entities for which log records have analytical value. As of this release, a new **Export Log Tables** maintenance object option allows an entity to be configured to explicitly include its log records when exported.

### Generalized Data Export Support for Lost Ongoing Export Files

The Generalized Ongoing Export (F1-GEEXO) batch process now keeps a backup of all entity keys exported by a specific batch run number in a designated backup table. A new Restore Generalized Export Keys (F1-GERST) batch process assists in recovering from such lost file situation. The new process restores the keys of all entities that were exported during a specific batch run, from the backup table back to the ongoing changes queue, causing them to be exported again on the next ongoing export batch run.

Note that this method does not restore the exact content of the original file that was lost. That content cannot be reproduced. Instead, this process ensures that the entities that were included in the lost file would be extracted again.

Previously, the Generalized Ongoing Export (F1-GEEXO) batch process did not keep a record of which entities were exported on a specific batch run. In cases where an export file is lost or damaged, there was no way to identify which entities should be exported again.

## To Do Management and Processing Enhancements

This section describes the following new and enhanced To Do features introduced in this release:


- To Do Management by Assigned User
- To Do Dashboard Details Tab


### To Do Management by Assigned User

Previously, the **To Do Management** portal restricted queries to a specific To Do Type. Now either a To Do Type or an Assigned User are required. As a result, there is now support for management of entries assigned to a user across multiple to do types.

### To Do Dashboard Details Tab

The **To Do Dashboard** portal is enhanced to provide a detailed list of the entries selected by the charts on a new **Details** tab.

The new tab supports further filtering and actions a user can take to manage the selected entries. This provides the same functionality supported by the **To Do Management** portal.

 

**Note:** With this enhancement to the **To Do Dashboard**, we strongly recommend to discontinue the use of the **To Do Summary** and **Supervisor To Do Summary** pages. The To Do Dashboard provides the functionality found in the two legacy 'summary' pages, and it also provides additional functionality not found in those pages.

# Batch Processing Enhancements

This section describes the following new and enhanced batch processing features introduced in this release:


- Batch Logs for Issues Found Before Thread Execution
- Batch Submission Parameters Defaulted from Batch Control
- Manifest File Includes Previous Manifest File Information
- Plug-in Driven Batch Variables
- Plugin-driven Extract - Support for Writing to Multiple Files and Flexibility in File Names
- Submit Batch Job REST Linux Script
- Support for Encrypted Files and Digital Signatures
- Support Override of Base Algorithm on Batch Control


## Batch Logs for Issues Found Before Thread Execution

The product captures a standard output file for each thread. If there are errors found in any thread, an error file is also produced which is accessible from the **Batch Run Tree** page. You can now capture log files for steps performed prior to the thread execution, for example in the "get job work" step.

The batch framework writes some basic logging information for the standard output file. The format of the file name produced is *batch control + run number + re-run number + date- time.stdout*. You will see an 'stdout' file for the batch run as well as one for each thread. Individual batch jobs may now also write log statements to the new stdout file at the batch run level.

If a batch job encounters an error in the steps before the thread execution, for example in the "Select Records" step, an error file is also produced. The format is *batch control + run number + re-run number + date-time.stderr*.

These files are also accessible from the **Batch Run Tree** page.

 

## Batch Submission Parameters Defaulted from Batch Control

When submitting a batch job via any method, the system compares the providedparameters to those defined on the batch control.

- Any parameters that are missing from the request are populated from the batchcontrol. Note that if the parameter is required and a default value is defined on the batch control, that value is used. If the parameter is optional, any default value found on the batch control is ignored. For optional parameters, the defaultvalue is only for online defaulting (where the user is able to choose to remove thedefault).
- In addition to the value, parameters define both a parameter name and sequence.If the parameters in the request only provide parameter name or sequence, the missing field is filled in based on the related batch control's definition. Note thatif the request includes both the parameter name and the sequence, the system does not validate that the sequence is correct for the parameter name. The parameter name is the important field for the batch job functionality. The sequence is needed to ensure that the row is unique.

This feature improves the usability of the REST API used to submit a batch job (the 'submit' operation for the F1-SubmitJob inbound web service). Previously, the caller of this API was required to determine the batch parameters from the batch control ahead of time. With this enhancement, callers can submit the request for the batch submission and only supply the parameter name/parameter value for optional parameters where a value is desired or for required parameters when the value differs from the default value on the batch control. Any optional parameters where no value is needed or required parameters where the default value from the batch control is acceptable do not need to be provided.

## Manifest File Includes Previous Manifest File Information

When sending the latest data export file using the Generalized Data Extract functionality, the manifest file produced with an extracted file now includes the previous successful batch run number and the previous manifest file name. The receiving systems can use this information to compare with the most recent file received to determine if any expected file is missing.

This allows for quick detection of issues when information is regularly extracted to an external system.

## Plug-in Driven Batch Variables

The Plug-in Driven Upload process (template batch control is F1-PDUPL) now supports the following variables in the Processed File Extension parameter in addition to text:

- {RDT} or {runDateTime}
- {RD} or {runDate}
- {RT} or {runTime}
- {BC} or {batchCode}
- {BN} or {batchNumber}
- {RN} or {rerunNumber}

 

- {TN} or {threadNumber}
- {USR} or {userId}

The parameter must still end with text to streamline the existing system check, which ensures that the name of the file to upload does not include the text included in the Processed File Extension parameter. The User ID used for the parameter is the submission user instead of the "batch user."

Also, the Plug-in Driven Extract process (template batch control is F1-PDBEX) now supports the additional variables {USR} or {userId} as part of the file name. When these variables are specified, the submission user's ID is used.

## Plugin-driven Extract - Support for Writing to Multiple Files and Flexibility in File Names

The plug-in driven extract process has been enhanced to allow for the Process Records algorithm to return one or more file names to write the data to. This allows for use cases where the data should be segregated by a business value. It also supports indicating a different file name for each schema returned by the algorithm, allowing for one unit of work to contribute to more than one file. Several use cases informed this enhancement:

- The data being extracted is related to different service providers and a file should be produced for each service provider. In this case, service provider is the unit of work and each unit of work could produce a separate file.
- The implementation has several CIS divisions and when extracting data, for example an asset, the data should be segregated such that each division gets its own file.
- An extract of Person data should result in a file with all the individual person information, a file with all the business person information, and a consolidated file of contact information for all person types. In this case, one call to the Process Records algorithm will result in data written to two different files (individual or business person information and contact information).

If a batch job is multi-threaded, each thread continues to produce its own set of files. For the service provider use case above, a multi-threaded process should still result in a file per service provider. However, for the Division and Person examples, each thread may include files for the same division or person type. The option to concatenate files is still supported and will concatenate files where the file name is the same except for the thread number. The existing limitations for the use of file concatenation still apply. This is documented in the batch control parameter description in the metadata.

## Submit Batch Job REST Linux Script

The submitbatchREST.sh Linux script enables implementations to submit batch jobs when using external batch schedulers. This script uses the Submit Operation of the F1-SubmitJob REST service to create an entry in the Batch Job Submission table, which the batch daemon polls to pick up and run the batch job. The script also uses the Get Operation of the F1-SubmitJob REST service to periodically poll the system to retrieve the "Get Batch Job" or "Batch Run" details to provide status updates until the completion of the batch job.

 

## Support for Encrypted Files and Digital Signatures

Exchanging and signing encrypted files requires the sender and recipient to share keys. The system needs to record the public keys provided by external parties and generate public/private key pairs so the public keys may be exchanged when encrypting or signing files.

A new public encryption key ring business object (F1-ExtKeyRing) allows the public keys provided by the recipients of encrypted files to be stored. The key ring also captures the external system ID and external reference of the system receiving the encrypted files. A new encryption key pair business object (F1-InternalEncryptionKey) allows private/ public key pairs to be generated and stored using standard PGP format. The new internal key pair is classified as 'File Encryption / Signing'. Key rings previously classified as 'Signature' are now referred to as 'RSA Signature'. A new flag has been added to key ring to categorize key rings as external, internal, or OAuth.

The lifecycle of a key ring key has been changed to provide more flexibility when rotating keys. Internal generated keys are created in a status of pending. They may be manually activated when the public key has been shared with the applicable third parties. When a external public key is added, the new key is automatically activated and the previously active key is expired. Expired keys may be manually inactivated. Note that inactive keys can no longer be activated again.

Batch processing has been enhanced to implement file encryption and decryption using PGP standards. Digital signatures are also supported, using the standard 'Sign' option. New batch parameters have been introduced to specify the external and internal keys to be used for encryption and/or signing and the file adapter automatically encrypts, decrypts and signs the file data based on the existence of these parameters.

## Support Override of Base Algorithm on Batch Control

The following batch control plug-in spots are single algorithm plug-in spots:

- Select Records
- Process Record
- File Upload

If the product provides batch controls with algorithms for any of the above plug-in spots plugged in, you can now override the base algorithm by plugging in your own custom algorithm using a higher sequence. The system uses the algorithm with the highest sequence.

Previously, if a base product batch control was provided with algorithms for any of the above plug-in spots, you were not able to override the batch control algorithm. You could only clone the entire batch control if you wanted to override any of the provided algorithms.

 

# Implementation Tool Enhancements

This section describes the following new and enhanced implementation tools introduced in this release:


- Action Provided to MO Audit Plug-In Spot
- Attachment Malware Scan Plug-in
- Base Product Index Data Visible in Table Portal
- Business Object Status Reasons REST API
- Characteristic Mapping Language Genericized
- Debugging Tools - Consolidated into a Single Button
- Dropdown Lists REST API
- Expand Tree REST API
- Extensions Dashboard Portal
- HTML Editor Syntax Highlighted
- HTML Row Header Reference Update
- Insights REST API
- Javadocs Viewer
- Menu Item Configuration for Add Action
- New Base Display Icon Images
- Parameter Update for New Language Batch Program


## Action Provided to MO Audit Plug-In Spot

The action of a record is now provided to the MO Audit plug-in spot. For business use cases where the algorithm should perform different logic based on whether the record is added, changed, or deleted, this information simplifies algorithm code. Previously, algorithms with this requirement had to determine whether the record was new, changed, or deleted themselves.

MO Audit algorithms now receive the action for the impacted object simplifying logic that may differ based on the action.

## Attachment Malware Scan Plug-in

The system supports a malware scan algorithm that is called when adding an attachment. This uses the "Attachment Malware Scan" System Event for on the **Algorithms** tab of the **Installation Options - Framework** portal. If an algorithm is plugged into this spot, it is called every time an attachment is uploaded, regardless of the method. In addition, the product has supplied a base algorithm that calls ClamAV. The ClamAV is not provided. Implementations need to separately install that software. If your implementation prefers to use a different malware scanning software, you can implement your own algorithm and plug it into the Installation Options.

 

Scanning attachments for malware before they are uploaded allows you to prevent harmful information from getting loaded to the system.

## Base Product Index Data Visible in Table Portal

The **Index** tab on the **Table** portal now shows the base product-owned indexes. This allows for developers and implementers to view the information about the product delivered indexes.

Previously, the index information was only visible in the database. Also, in a previous release, metadata tables were added for defining indexes associated with a Table, however the new index metadata tables were not populated with the based product delivered indexes.

## Business Object Status Reasons REST API

A new Status Reasons REST API (F1-StatusReasons) allows an external user interface application to retrieve valid reasons to be presented to a user when they perform an action that transitions an entity to a new status.

User interface applications like Visual Builder can use a new API for presenting valid reasons for transitioning an entity to a new status.

## Characteristic Mapping Language Genericized

The characteristic mapping maintenance object (MO) is enhanced to allow for future support of mapping identifier values as well. As part of this effort, the maintenance object and the UI portal and many of the related artifacts are renamed to be more generic: Analytics Attribute Mapping.

Characteristic Mapping continues to be a business object for this MO and no changes exist for that functionality.

The newly rebranded Analytics Attribute Mapping table now includes new columns to support mapping of identifier values. There is a new business object visible in this release: F1-IDMapping. This business object captures the data needed to configure mapping of a given identifier type and value defined in a child table of an MO to a user defined field for a target dimension for the parent table of that MO.

## Debugging Tools - Consolidated into a Single Button

The various debugging tools that are enabled when the URL includes the debug=true parameter have been moved to a slide out panel enabled by a new 'bug' icon. The options visible to you when the debug parameter is turned on depend on whether your implementation is cloud or on-premise and your individual security rights.

In addition, the product has provided a new menu entry in the Help menu: Enable | Disable Debug. If you have access to the security application service for this menu entry, you can turn on or off debug without changing the URL parameter.

 

## Dropdown Lists REST API

A "Dropdown Lists" (F1-DropdownLists) REST API retrieves data needed for building one or more drop-downs. Information for a drop-down includes a list of valid codes and their corresponding descriptions.

The web service supports the following types of drop-down data sources:

- Lookup field
- Extendable lookup
- All records in an admin maintenance object (only single prime key field entities are supported)
- Business service/service script computed list of values

User interface applications like Visual Builder (VB) may use a new API for retrieving data displayed as drop-downs.

## Expand Tree REST API

The product provides a comprehensive infrastructure that supports user interface rendering of hierarchical information for a specific context based on configurable tree definitions. For example, it can present a tree view of entities related to an account. Now a new "Expand Tree" REST API (F1-ExpandTree) allows an external user interface application to retrieve hierarchical information for a specific context based on the same tree configuration. The information provided by the web service focuses on presentation content and includes minimal visualization recommendations, allowing the external application to render each tree node as per its own configuration and rules. Since they are application specific, the information also does not include action-related settings.

## Extensions Dashboard Portal

The new **Extensions Dashboard** portal provides a high-level summary of all utility- owned entities and extensions made to base product entities. Information is summarized by maintenance object and allows the user to view the specific entities for a specific maintenance object and navigate to the respective page or portal for more information. With this information, implementations can better assess the necessary testing when planning for product upgrades and investigate the removal of extensions when upgrading to reduce costs.

 

## HTML Editor Syntax Highlighted

The HTML editor on the UI Map/Schema tab has been updated to use a syntax highlighter to make it easier to review and update HTML.


**Figure 9: HTML Editor Screen**

This makes it easier to review and update the HTML.

## HTML Row Header Reference Update

The HTML5 standard requires the use of the <TH> element within a table row when it is being used as the row header (<th scope="row"></th>). Previously, these elements were allowed to use a <TD> element for the row header.

For tables that are generated by Oracle Utilities Application Framework (Data Explorers, standard UI Map grids, and more), the HTML is automatically updated to match Oracle standards. If you are creating a table manually, a change is not required but it is recommend you update your HTML for better accessibility.

## Insights REST API

The product already provides a comprehensive infrastructure that supports user interface rendering of various types of insights for specific contexts. For examples, billing insights about an account, person, and more.

A new "Insights" REST API (F1-Insights) allows an external user interface application to retrieve insight information for a specific context based on the same insight configuration. The information provided by the web service focuses on insight content and includes minimal visualization recommendation, allowing the external application to render the insights as per its own configuration and rules. For the same reason, the information does not include action-related settings because they are application specific.

 

## Javadocs Viewer

Javadocs viewer is now available via the **Admin → Implementation Tools** menu. This launches the Javadocs landing page, which allows you to view information about base delivered Java classes and packages. In addition, when viewing an algorithm type, batch control, or foreign key reference, a 'source viewer' icon is visible when a Java program is displayed. If you click the icon, it launches Javadocs for that particular program.

In the **Script** page, the **Script Tips** zone in the dashboard includes a link to View Groovy Javadocs. This allows script writers to view information about methods and classes available for developing Groovy scripts.

## Menu Item Configuration for Add Action

Menu items include optional configuration for application service and access mode. For menu items associated with searching, security is controlled by the associated portal or transaction's application service. Therefore, defining an application service on these menu item is only useful to override the base application service, which is not common. However, for many menu items related to the add action, if a user did not have access to that action, they may still see the option on the menu and would only get a security error later after attempting to add. Implementations can override this by configuring an application service for the "add" Menu Item.

All product menu items handling an 'add' or any other action are configured with an application service or access mode by default.

## New Base Display Icon Images

The following additional SVG icons are provided for use in contextual insights, trees, and other user interface features that support SVG icons.

| Icon | ID | Description |
|---|---|---|
|  | F1STAR | Star |
|  | F1STARTS | Star-Solid |
|  | F1VWHD | Hidden from View |

Additional icons allow for an enhanced user experience for displayed information.

 

## Parameter Update for New Language Batch Program

The language input parameters in the F1-LANG (New Language) batch program were adjusted to avoid confusion when submitting the batch for deletion of a language.

The two parameters were previously called Source Language and Target Language. Their descriptions have changed to Copy From Language and Action Language. The parameter names were not changed.

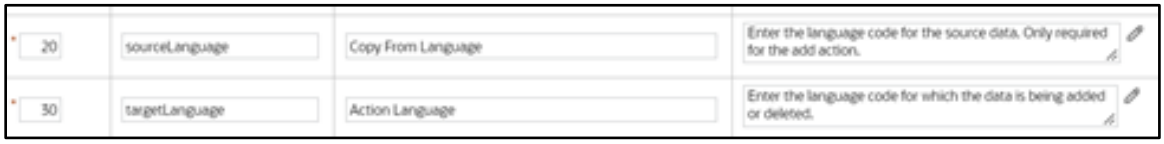


**Figure 10: Parameters for Adding New Language**

The behavior for adding a new language has also not changed. You should continue to put the Language to copy from first, and then the language you are adding as the second parameter. For example, if you are creating German language rows, using English as the Copy From Language, you would populate:

- **Action**: ADD
- **Copy From Language (formerly Source Language)**: ENG
- **Action Language (formerly Target Language)**: GER

However, the behavior for deleting changes has been updated. Previously, you populated the Source Language for the delete. Now you populate the Action Language. For example:

- **Action**: DEL
- **Copy From Language (formerly Source Language)**:
- **Action Language (formerly Target Language)**: GER

In addition, the batch program has been updated to prevent you from deleting rows for the ENG language that would result in the product system metadata being deleted.

 

# Content Migration Assistant (CMA) Enhancements

This section describes the following new and enhanced CMA features introduced in this release:


- CMA Import Performance Improvements
- CMA Support for Separate Configuration and Business Data Migrations
- Export Content Migration Assistant Data to an Older Version
- Migration Plan Pre-Compare Algorithm Execution Update


## CMA Import Performance Improvements

By default, the Content Migration Assistant (CMA) import process creates a migration object for each imported entity. This allows for a granular reporting and error handling at the entity level. When importing a high volume data set of business entities, this granular management has a performance toll.

The CMA import process now supports a Bulk Import option by which a group of entities, of the same maintenance object, is managed as a single migration object. Using this option reduces the migration object management effort throughout the process and results in better performance. Each entity is still individually validated in this mode, as in regular import processing, but if one entity is invalid the entire migration object is not applied (impacting all entities within it). Bulk import mode is useful when importing a large set of data from a validated data source when almost no errors are anticipated.

The indication of whether to use bulk import or not is specified on the migration data set import request.

Another new option, also specified on the migration data set import request, allows you to indicate that all imported entities are assumed to be new additions to the current environment. By indicating that this import is Insert Only, the import process avoids unnecessary steps to determine whether the entity should be added or updated.

These options are only supported for master and transaction maintenance objects. They are not applicable to configuration migrations.

The import step of the CMA process has been enhanced to execute insert statements more efficiently by leveraging the database's bind variables functionality. This is transparent to existing in-progress migrations.

 

## CMA Support for Separate Configuration and Business Data Migrations

By default, the same import CMA batch processes manage configuration and business data migrations. Typically, business data migrations involve high volume of records compared to much lighter configuration data sets. Processing them together by the same batch process slows down the performance of configuration migrations, preventing them from completing faster and more frequently. The issue mainly affects test-like environments where mixed data class migrations is more common: configuration data is imported from a lower environment and large test data is imported from a higher environment. Now you can adjust your CMA configuration in such environments to benefit from separating the import processes for configuration and business data.

The need to separate import processes mainly applies to migration objects because of their volume. Migration data set and transaction records are of low volume and as such are still managed by the same batch processes.

New batch processes are provided for importing migration objects containing business data:

- F1-MGOPB - Migration Object Monitor (Business)
- F1-MGOAB - Migration Object Monitor (Business) - Apply

By default, the existing migration object batch processes continue to handle both classes of data. To use the new batch processes for business data, you need to associate the new business data migration object BO provided as part of this enhancement with the new batch processes. See the steps below for details.

## Export Content Migration Assistant Data to an Older Version

When performing a Content Migration Assistant (CMA) export, the format of the file is specific and the CMA import step knows how to read the file. There are times when the product makes an enhancement to CMA that requires a change in the structure of the export file at which point the 'version' of the CMA file is incremented. When this happens, the import step is able to detect if you are importing an older version of the CMA file and proceeds accordingly.

The product now provides support for exporting a CMA file using an older version format. For example, the current CMA version is 5. When creating a Data Set Export, you can indicate that you want to export using version 4. This is useful if you have upgraded one of your environments to a version of the product that uses CMA version 5, and you need to export data to an environment that has not yet been upgraded and is therefore still on version 4.

 

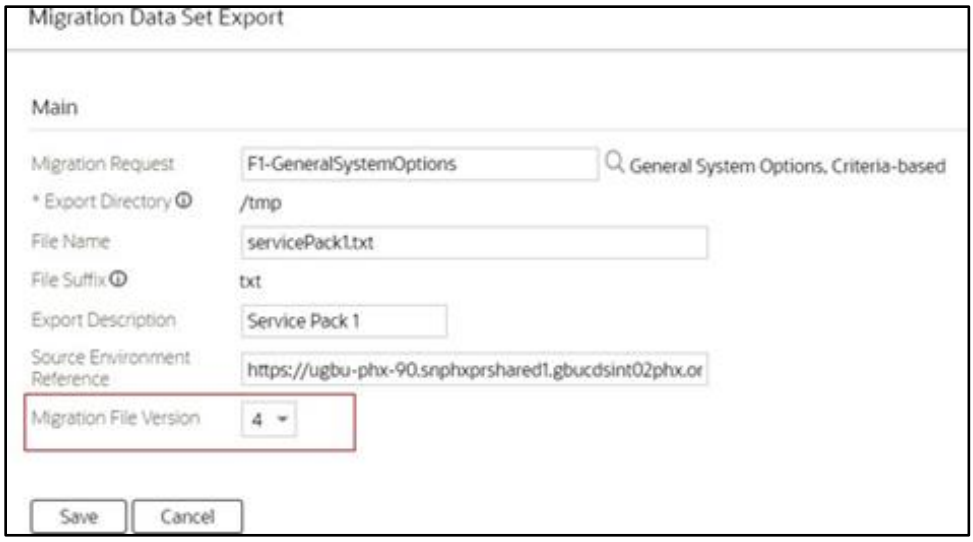


**Figure 11: Setting the Migration File Version for Data Export**

This is analogous to choosing to save a Microsoft Word document using an older version of Word (for example, with the .doc file type) during the period where not all software could consume the newer (.docx) version.

## Migration Plan Pre-Compare Algorithm Execution Update

When the migration data import process runs the pre-compare algorithms for a given migration plan, the logic now includes the algorithms configured on the migration plan in the target environment as part of the execution. Previously, this step only included the pre-compare algorithms carried over from the source environment. This ensures that any additional data updates applicable at the target are included.

 

# Miscellaneous Enhancements

This section describes the following new and enhanced miscellaneous features introduced in this release:


- Application Service's Application Security Zones
- Cloud Object Storage Support for Platform as a Service (PaaS)
- Digital Self Service Masquerading Using Key Ring
- HTML Sanitization Improvements
- Improved Characteristic Type Referential Integrity
- Key Ring Support for OAuth Client and Secret
- New Class Element on Business Flag Standard Name Business Object
- Support for Capturing and Exporting Batch Run Analytics Data


## Application Service's Application Security Zones

The zones on the **Application Service - Application Security** tab have the following improvements:

- The **Deny Access** button in the **User Groups Linked** zone has been converted to a mass action button, allowing updates to multiple groups with one action. In addition, the search filters have been enhanced to provide a search within search to find a specific user or user group, filter by user group description, and exclude expired links. The Expiration Date column has been enhanced to highlight expired links in bold with red text and an asterisk. The Access Modes column now shows only the application service access codes that are not configured for the user group.

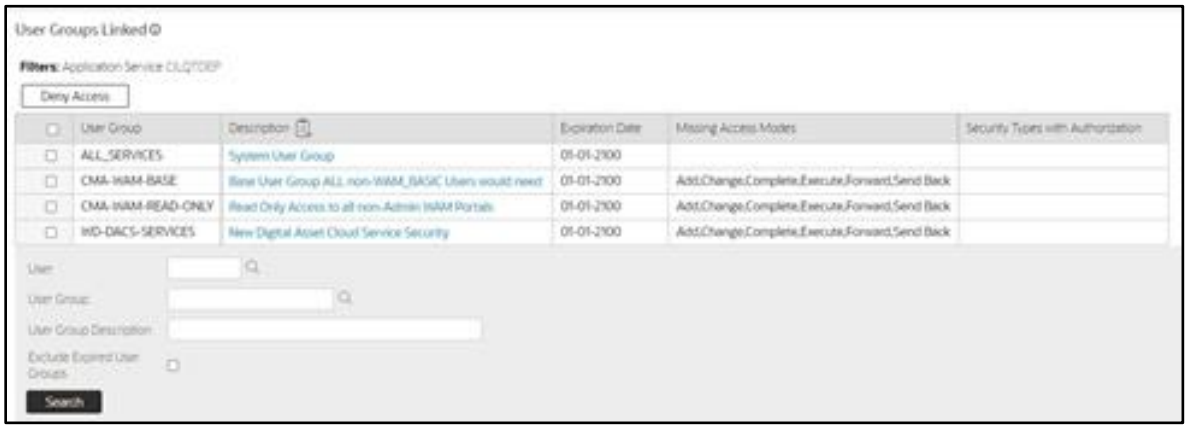


**Figure 12: User Groups Linked Zone**

- The **Grant Access** button on the **User Groups Not Linked** zone has been converted to a mass action, allowing updates to multiple groups with one action. A pop-up window provides the ability to set the expiration date and remove unwanted access modes. In addition, the search filters have been enhanced to provide a search within search to find a specific user or user group and to filter by user group description.

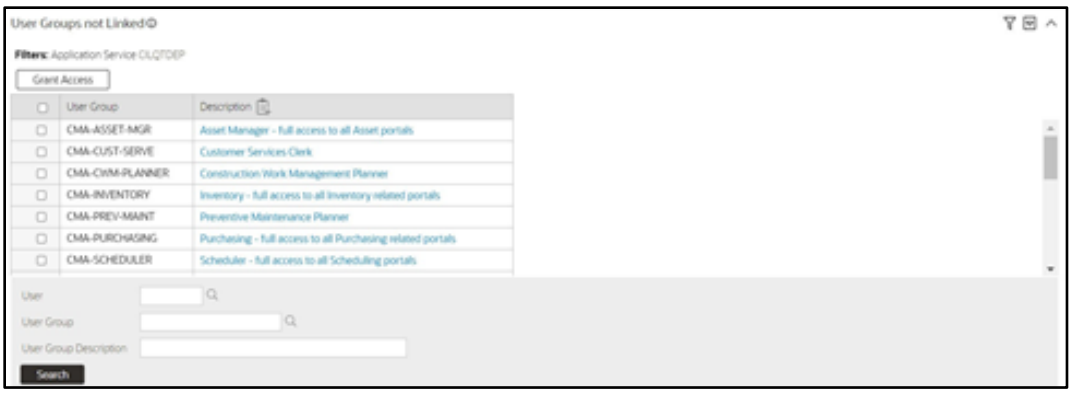


**Figure 13: User Groups Not Linked Zone**

## Cloud Object Storage Support for Platform as a Service (PaaS)

Implementations using Platform as a Service (PaaS) can configure the file adapter of the Oracle Cloud Infrastructure Object Storage service to store interface files and reports.

## Digital Self Service Masquerading Using Key Ring

The product supports the ability for an implementation to authorize an external person to view the customer's account information in a customer-facing portal (such as Digital Self Service). The system uses a private/public key to enforce standard security measures. Previously, the Redirection Targets master configuration captured a reference to the alias for the key pair stored in the application keystore. Users may now capture a reference to a Signature key ring instead of the alias. This allows implementations to generate the key pair and to rotate the key pairs over time for greater security. Keystore aliases may no longer be used.

The master configuration for Redirection Targets now allows a key ring to be defined instead of the application keystore alias. This provides you with the ability to more easily manage Digital Self Service security.

## HTML Sanitization Improvements

The product uses HTML sanitization logic to protect against HTML injection. In this release, the product has improved how it handles custom attributes. Previously, the sanitization logic would automatically sanitize unrecognized custom attributes. Now the sanitization logic has been adjusted to assess the data referenced by the attribute. If the data appears to pose an HTML injection risk, the attribute is sanitized by adding 'data-' to the attribute, rendering it harmless. If the data is considered safe, the custom attribute is accepted as implemented.

Improvements to the HTML sanitization functionality to better handle custom attributes.

 

## Improved Characteristic Type Referential Integrity

The logic to check referential integrity for characteristic types and characteristic values is adjusted to be more targeted, and uses the characteristic entity configuration.

Tables that hold characteristic types and values fall into one of the following categories:

1. Characteristic tables that are a child record of a maintenance object and are used to capture additional information about that object.
2. Log tables that use characteristics to reference additional information related to the log.
3. Configuration tables to define valid characteristics for a related master or transaction table. For example, on the To Do Type, you can configure valid characteristic type for To Do Entries of that type.
4. Configuration tables that use characteristic types for eligibility criteria.
5. Staging tables that capture characteristics as part of an integration step.

Most characteristic tables fall into the first two categories. For these two categories, there is a characteristic entity flag value for each table and the table metadata defines its characteristic entity. For example, the To Do Entry Characteristic table defines the To Do Entry characteristic entity flag value. In this release, those tables have been updated to turn off the Enable Referential Integrity switch for the Characteristic Type and Characteristic Value constraints. Instead, explicit deletion validation logic has been added for Characteristic Type and Value. The logic looks at the Characteristic Entity values associated with the Characteristic Type and will only check the tables related to those values for references to the Characteristic Type/Value.

Tables in category 3 do not reference a characteristic entity value. Since these are configuration tables and low volume, the constraints for Characteristic Type and Characteristic Value continue to turn on the generic referential integrity.

Tables in categories 4 and 5 may or may not have an explicit characteristic entity value depending on the use case. For these types of tables, if there is no Characteristic Entity, it is at the discretion of the product that owns that table as to whether or not referential integrity is enabled for that table.

This enhancement ensures that the deletion logic will not spend time checking every characteristic table for a reference the characteristic type/value. It will first explicitly check the tables related to the characteristic entities configured on the Characteristic Type, and then the standard generic referential integrity based on the constraint configuration will be applied.

Note that as part of this change the referential integrity is also checked when removing a Characteristic Entity value from the Characteristic Type. For example, if you have a Characteristic Type that references the To Do Entry characteristic entity and you want to remove that characteristic entity value, the system will check first that there is no To Do Entry that references that Characteristic Type.

 

## Key Ring Support for OAuth Client and Secret

The product supports securing outbound messages using OAuth authentication. The client ID and secret used to obtain access are stored as message sender context values.

A new OAuth key ring business Object (F1-OAuthKeyRing) allows the client ID and secret to be stored in the same secure repository as other key ring classes, such as Signature keys. The key ring may be configured on the message sender context, replacing the client ID and secret context types. This enables the client secret to be updated periodically without having to update the associated message senders.

In addition, the key ring maintenance object is now an 'owned' entity. Message senders can now be delivered with the appropriate key ring already configured. Users will only have to add their specific keys to the delivered key ring.

## New Class Element on Business Flag Standard Name BusinessObject

The F1-BusinessFlagStandardName business object is enhanced to include a new, required element for Class. The class element is mapped to a characteristic of type F1-BSFCL, which has values of Business Flag and Real Time. The description on the **F1-BusinessFlagStandardName** BO has been changed to External Insight Standard Name to reflect its expansion to a wider set of external insights.

Additional class element added to the External Insight Standard Name (formerly described as Business Flag Standard Name) extendable lookup business object allows developers to restrict the choice of standard name types on a business flag type to specific classes.

## Support for Capturing and Exporting Batch Run Analytics Data

There is a high volume of batch run data in the operational system that changes frequently and is recorded in a complex set of relationships. This is not well suited for analytics that run directly off the operational data or for being exported for use in other environments. The previous release introduced new tables to support snapshots containing only the batch run and batch thread data applicable to analytics. This release introduces new batch processes designed to populate and export from these tables in increments.

The Batch Run Analytics Snapshot Update and the Batch Thread Analytics Snapshot Update processes are used to add data to the snapshot tables on an ongoing basis. Each snapshot update selects only the batch runs and threads not already in the snapshot. In order to support the initial population of the tables, parameters are provided to limit the records selected to a range of months. Refer to batch controls F1BRANSN and F1BTANSN for more information.

The Batch Run Analytics Snapshot Data Export and the Batch Thread Analytics Data Export processes are used to extract data from the snapshot tables on an ongoing basis. These processes assume that a Data Export Control exists for each of the snapshot maintenance objects to capture the date of the previous extract as a reference point for selecting the next set of records. Refer to batch controls F1BRANEX and F1BTANEX for more information.

 

The analytics views have not been amended to reference the batch snapshot tables in this release. The batch processes are provided to allow the tables to be populated ahead of the introduction of new batch views in future.

 

# Deprecation Notices for OUAF Version 4.5.0.1.1

This section describes features and system data that are deprecated in this release and planned for deprecation in the future release of Oracle Utilities Application Framework. It contains the following topics:


- Deprecation in This Release
- Deprecation Planned for Future Releases


## Deprecation in This Release

This section lists the functionalities and system data that are deprecated in Oracle Utilities Application Framework Version 4.5.0.1.1:


- Support for Migration Requests F1-FrameworkAdmin and F1-SchemaAdmin
- Work Calendar Legacy Page Metadata
- Time Zone Legacy Page Metadata
- Application Viewer
- Invite User to Mobile Application Zone
- Mobile Remote Message Artifacts
- Mobile Data Terminal Artifacts
- Mobile Component Artifacts
- Mobile Data Terminal Type Artifacts
- Deployment Part Artifacts
- Deployment Type Artifacts
- Deployment Artifacts
- Master Configuration Business Objects Related to Mobile Application Framework
- Migration Plan - Import Algorithms
- User Group Service Management Portal


### Support for Migration Requests F1-FrameworkAdmin and F1-SchemaAdmin

These two migration requests have been marked as not recommended for a long time. As of this release, they are no longer delivered in base.

For backward compatibility, the two migration requests are updated to have a "CM" owner for upgrading implementations. To avoid confusion, you may remove the records from your installation if they have never been used.

 

## Work Calendar Legacy Page Metadata

The following navigation keys have been removed:

- workCalendarMaint
- workCalendarMainPage
- workCalendarHolidayGrid
- workCalendarMainPage_H

Records in the UI metadata program component tables related to the above navigation keys.

## Time Zone Legacy Page Metadata

These navigation keys have been deprecated:

- timeZoneMainPage
- timeZoneMainPage_H
- timeZoneTabMenu

Records in the UI metadata program component tables related to the above navigation keys.

## Application Viewer

The application viewer is removed and no longer supported. Instead, we recommend you use the Javadocs Viewer. For more information, refer the Javadocs Viewer section.

## Invite User to Mobile Application Zone

This zone was implemented as part of the mobile application, which is no longer supported.

## Mobile Remote Message Artifacts

The user interface metadata has been removed for this object. This table was originally configured to support ILM, but it is no longer included in ILM partitioning steps.

Batch controls related to processing this table were removed if no instance data in the Batch Run table is found. If instance data is found, the batch control metadata is retained with a CM owner flag.

## Mobile Data Terminal Artifacts

The user interface metadata has been deprecated for this object.

## Mobile Component Artifacts

The user interface metadata and migration plan pan have been removed for this object.

## Mobile Data Terminal Type Artifacts

The user interface metadata and migration plan have been deprecated for this object.

## Deployment Part Artifacts

The user interface metadata and migration plan pan have been removed for this object.

## Deployment Type Artifacts

The user interface metadata and migration plan have been deprecated for this object.

## Deployment Artifacts

The user interface metadata has been removed for this object.

## Master Configuration Business Objects Related to Mobile ApplicationFramework

The master configuration business objects F1-MobileConfigurations and F1-MobileIdentityConfiguration are no longer delivered in base. Artifacts related to these BOs are removed if no master configuration records are found for the respective BOs. If there is a master configuration found for either, then the related data remains with a 'CM' owner.

The REST service and corresponding script to update the master configuration is deprecated.

- IWS: F1-MobileIdentityConfiguration
- Script: F1-MobIdMCfg

## Migration Plan - Import Algorithms

The Import algorithm plug-in spot for migration plan was flagged for deprecation many years ago and the base product does not deliver algorithms for this plug-in spot. The Pre- Compare plug-in spot is the recommended mechanism for adjusting migration data during import.

## User Group Service Management Portal

This functionality was moved entirely from the **User Group Service Management** portal to the **Service Manager** tab on the new **User Group** portal.

 

# Deprecation Planned for Future Releases

This section lists the functionalities and system data that will be deprecated in the future releases of Oracle Utilities Application Framework:


- Support for Previous User Experience
- F1-DFLTAPS and FWLZDEXP Application Services
- Workflow and Notification Metadata and Database Tables
- Mobile Application Framework Metadata
- Key Ring Validation Scripts, Algorithm Types, and Algorithms
- UI Metadata Related to Converted Pages
- Miscellaneous System Data
- XSLT Managed Content Type
- REST IWS - Original REST Servlet
- Append Setting from Pagination
- Support for Master/Subordinate Servers for Web Service Catalog
- Batch Run Statistics Portal Functionality
- Configuration Migration Assistant Import Algorithm Plugin Spot
- F1-MAINPROC Business Object Read When Pre-processing Exists


## Support for Previous User Experience

In the current release, the product provides an option to Switch UI View. This changes the current user experience for the user for that session. Assuming the user is in the latest user experience (referred to as Redwood), this action switches the user experience to the previous look-and-feel.

In the future, the product plans to remove support for the ability to switch that design that preceded Redwood.

## F1-DFLTAPS and FWLZDEXP Application Services

In an effort to consolidate application services, the product is removing all references in base delivered metadata to F1-DFLTAPS and FWLZDEXP. Records will instead reference F1-DFLTS.

You should select **Admin → Security → Application Service** and view F1-DFLTAPS. Review the Secured Objects zone. Note especially if your implementation uses this application service within HTML or Schemas. Any references should be adjusted to F1-DFLTS or a different application service that is appropriate for the business rule.

Implementations should repeat the above steps for the application service FWLZDEXP.

In addition, if your implementation has any hard-coding of either F1-DFLTAPS and FWLZDEXP in code that is not detectable by the Secured Objects zone, those references should also be updated to use F1-DFLTS or a different application service that is appropriate for the business rule.

## Workflow and Notification Metadata and Database Tables

Workflow and notification functionality was an early way to support exchanging messages with an external system (notification) and providing a configurable process for acting on incoming messages (workflow). In more recent years, the functionality for managing external messages is supported using Outbound Message and Inbound Web Service functionality. In addition, there are several features to support processing incoming messages. Service scripts can handle simple use cases. For more complicated processes, the service task or other business object driven objects are available.

The metadata and database tables related to this feature will be removed in a future release. Note that only a portion of the functionality for this feature is managed by Oracle Utilities Application Framework.

## Mobile Application Framework Metadata

Removal of support for the Mobile Application Framework has already been announced in a previous release. However, there is metadata still included in the application related to this functionality.

The metadata will be removed in a future release.

## Key Ring Validation Scripts, Algorithm Types, and Algorithms

The product is removing all scripts, algorithm types, and algorithms that performed validation rules on the K1-SignatureKeyRing business object. The algorithms have been removed from the BO configuration. There are requirements to expand the use of a signature key ring beyond the current implementation for object file storage and the existing validations are not applicable to other planned use cases.

The following items will be removed in a future release.

- Algorithm:
    - K1-KRDCKFS
    - K1-KRINCKFS
- Algorithm Type:
    - KRDCKFS
    - K1-KRINCKFS
- Message:
    - 11009 / 1402
- Plugin Script:
    - K1-KRDCKFS
    - K1-KRINCKFS

 

- Service Script:
    - K1-ChkCfgExL

## UI Metadata Related to Converted Pages

The UI metadata related to fixed pages that have been converted to portals will be removed in a future release. The navigation keys listed are related to each maintenance page. The related UI program component data will also be removed. Note that the metadata related to the search pages will not be removed at this time in case they are used on other fixed pages.

- To Do Entry Maintenance
    - toDoEntryCharGrid
    - toDoEntryDrillKeyValuesListGrd
    - toDoEntrySortKeyValuesListGrid
    - todoentrykeyvalue
    - todoentrymain
    - toDoEntryMaint
    - toDoEntryPopupAdd
    - toDoEntryPopupForward
    - toDoEntryPopupSendBack
    - Any help navigation keys
- Table Maintenance
    - metaDataTableFieldsGrid
    - metaDataTableMainPage
    - metaDataTableCFldsGrid
    - metaDataTableConstPage
    - metaDataTableMaint
    - metaDataTableRefByConstPage
    - metaDataTableFieldPage
    - Any help navigation keys
- Work Calendar Maintenance
    - workCalendarMaint
    - workCalendarMainPage
    - workCalendarHolidayGrid
    - Any help navigation keys

 

- Message Maintenance
  - msgMaintDetailsPage
  - msgMaintGrid
  - msgMaintPage
  - msgMaintTabMenu
  - Any help navigation keys
- Time Zone Maintenance
  - timeZoneMainPage
  - timeZoneTabMenu
  - Any help navigation keys
- Application Security Portal
  - f1appsecTabMenu
- Display Icon Portal
  - displayIconRefMaint

## Miscellaneous System Data

The following miscellaneous data will be deprecated in the future release:

| Object | Data | Description/Comments |
|---|---|---|
| Lookup Value | CHAR_ENTITY_FLG/F1SE | Characteristic Entity/Sync Request Inbound Exception |
| Script | F1-TDMgActSS | To Do Management – Process Actions (Deprecated) / Replaced by F1TDMgActSS |
| Script | F1AddDebugLg | Add Log for Monitoring Probe (Deprecated) / Replaced by a BS - F1-MONPRBLOG |
| Zone | F1-BOMOSRCH | Not in use by base functionality |
| Zone | F1-CATCHSCH | Not in use by base functionality |
| Zone | F1-MONAVKEY | Not in use by base functionality |
| Zone | F1-REVCONQRY | Not in use by base functionality |

## XSLT Managed Content Type

Entries in the Managed Content table related to XSL should be using the XSLTC managed content type and not the XSLT managed content type. In a future release, the XSLT managed content type will no longer be supported.

 

## REST IWS - Original REST Servlet

The original URL supplied for invoking IWS based REST services included the IWS Service name in its makeup. Support for this will continue for backward compatibility purposes, but it will be deprecated in a future release. You should adjust your existing integrations to use the currently supported URL.

## Append Setting from Pagination

There are several known issues with the functionality of the "append" option in pagination. It is recommended that you do not use this pagination setting.

## Support for Master/Subordinate Servers for Web Service Catalog

The Service Catalog Configuration (master configuration) enables you to define subordinate servers. Defining subordinate servers is no longer applicable for the Oracle Integration Cloud.

## Batch Run Statistics Portal Functionality

The **Batch Run Statistics** portal provides additional information about batch runs, but some functionality on the portal is related to capturing additional information from an external tool. This information is stored in a Fact record. Support for capturing additional information from an external tool will be discontinued in a future release.

## Configuration Migration Assistant Import Algorithm Plugin Spot

The Content Migration Assistant Import algorithm plug-in spot will be deprecated. It is recommended that you review any existing algorithms and create appropriate Pre- Compare algorithms instead.

## F1-MAINPROC Business Object Read When Pre-processing Exists

In the original implementation of configuration tools, the main framework maintenance BPA (F1-MainProc) did not perform a Read of the BO when a pre-processing script was linked to the BO via options. The pre-processing script was responsible for the Read.

In a subsequent release, a BO Read was added in F1-MainProc (even if a pre-processing script existed) to resolve a UI Hint issue related to child business objects. This solution introduced a problem only visible for specific scenarios and a different fix has been introduced. The new fix made the BO Read unnecessary in F1-MainProc. Because there are many pre-processing scripts that are properly performing the Read of the BO, ideally the BO Read should be removed from F1-MainProc so that multiple reads are not performed. However, there may have been pre-processing scripts introduced after the BO Read was included in F1-MainProc that were coded to not perform a BO read in the pre-processing script. Due to this situation, the BO Read is still performed as part of the processing of F1-MainProc.

When a pre-processing script exists, we plan to remove the BO Read from F1-MainProc logic. You should review your custom pre-processing scripts that are linked to your BO options to ensure that they properly perform a Read of your BO.

 

# Deprecation Notices for ORMB Version 6.0.0.0.0

This section describes features and system data that are deprecated in this release and planned for deprecation in the future release of Oracle Revenue Management and Billing. It contains the following topics:


- Deprecation in This Release
- Deprecation Planned for Future Releases


## Deprecation in This Release

The following table lists the objects which are deprecated in this release of Oracle Revenue Management and Billing:

| Object Type | Object Name |
|---|---|
| Lookup | BILL_PARTITION_FIELDS_FOR_MODEL_BUILDING, BILL_SEASONAL_FEATURE_FIELDS, BILL_SEGMENT_PARTITION_FIELDS_FOR_MODEL_BUILDING, BILLSEGMENT_SEASONAL_FEATURE_FIELDS |

## Deprecation Planned for Future Releases

The following table lists the objects which will be deprecated in the future release of Oracle Revenue Management and Billing:

<table>
<tr><th>Object Type</th><th>Object Name</th></tr>
<tr><td>Algorithm Type</td><td>C1_CURALG, SA_DERV_POPC, C1-AUDEVMPR, C1-PLASGNAU, C1-PRCASGNAU, C1-PLAUALG</td></tr>
<tr><td>Algorithm</td><td>C1-AUDEVMPR, C1-PLASGNAU, C1-PRCASGNAU, C1-PLAUALG</td></tr>
<tr><td>Feature Configuration</td><td>C1_EX_ROUND</td></tr>
<tr><td>Option Types</td><td>Currency Conversion Algorithm and Payment Distribution To-Do (from the C1_MLTCURACC feature configuration)</td></tr>
<tr><td>Table Columns</td><td>The following table lists the columns which will be deprecated in the next release:
<table>
<tr><th>Table Name</th><th>Column Name</th></tr>
<tr><td>CI_ACCT_PER</td><td>BILL_RTE_TYPE_CD, RECEIVE_COPY_SW, BILL_FORMAT_FLG, NBR_BILL_COPIES, CUST_PO_ID, NOTIFY_SW, and BILL_ADDR_SRCE_FLG</td></tr>
</table>
</td></tr>
<tr><td>Batch Control</td><td>GLASSIGN, C1-IAENT, C1-DARSU, BILLING</td></tr>
</table>

| Object Type | Object Name |
|---|---|
| View | CI_EFF_ACCT_PRICING_VW, CI_EFF_PER_PRICING_VW |
| Business Service | C1-EffectivePricing, C1_PriceParmBS<br>**Note:** Instead of using the **C1-EffectivePricing** business service, use the **C1-GetEffectivePricing** business service to view the data on the **Pricing (Account)** and **Pricing (Person)** screens. Similarly, instead of using the **C1_PriceParmBS** business service, use the **C1_PRICE_PARM** business object to add, edit, copy, and delete a parameter. |
| Service Program | EFFPRCSERVICE, C1_PRICEPARM |
| Column | ADDRESS1, ADDRESS2, ADDRESS3, ADDRESS4, CITY, NUM1, NUM2, COUNTY, POSTAL, HOUSE_TYPE, GEO_CODE, IN_CITY_LIMIT, STATE, and COUNTRY from the CI_PER table |
| Table | CI_PER_ADDR_SEAS |
| Screen | Rate Check, Policy (P&C), Insurance Control Central, Collection Control Central, Account Current, Variance Parameter |

Therefore, we strongly recommend you not to use these objects in any custom implementation.

 

# Product Documentation

User manuals and other technical documents are available in the Portable Document Format (PDF) format. You can download the release-specific documentation from either of the following locations:

- **Oracle Technology Network (OTN)** – You can access the ORMB release-specific documentation libraries from OTN using the following URL:

  http://www.oracle.com/technetwork/indexes/documentation/fsgbu-1364781.html

  It contains the **Documentation Library for Oracle Revenue Management and Billing On-Premise Solution** section. You can view and download a release-specific documentation library by clicking the **View Library** and **Download** links, respectively, corresponding to the respective ORMB version.

- **Oracle Help Center (OHC)** – You can access the ORMB release-specific documentation from OHC using the following URL:

  https://docs.oracle.com/en/industries/financial-services/revenue-management-billing/index.html

  The ORMB OHC page contains a drop-down list which allows you to select the ORMB version for which you want to access the documentation.

**Points to Note:**

You can access the documentation of a release prior to 5.0.0.0.0 from OHC by selecting the **Previous Releases** option from the list.

Always ensure that you download latest revision of the document from **OTN** or **OHC**.

From 6.0.0.0.0 release onwards, the Oracle Revenue Management and Billing Online Help (i.e., help.ear file) is not packaged with the application. The ORMB Online Help is published on Oracle Help Center (OHC). You can continue to use context-sensitive help from the application which will point to the respective topic on OHC.

# Documentation Updates

Here are some updates with respect to the ORMB documentation:

- From 6.0.0.0.0 release onwards, the Oracle Revenue Management and Billing Online Help (i.e., help.ear file) is not packaged with the application. The ORMB Online Help is published on Oracle Help Center (OHC). You can continue to use context-sensitive help from the application which will point to the respective topic on OHC.
- You can also directly access the online help on OHC in the standalone mode using the following URL:

  https://docs.oracle.com/en/industries/financial-services/revenue-management-billing/60000/ormb-online-help/Topics/ORMB_Intro.html
- The Reporting User Guide is decommissioned and no longer supported. For information related to the reporting feature, you need to refer the **Reporting** chapter in the Banking User Manual or Insurance User Manual.
- Oracle Utilities Application Framework Version 4.5.0.1.1 Software Development Kit Guide is available along with the release-specific documentation on the ORMB OHC page.

 

# Media Pack Download

Oracle Financial Services Revenue Management and Billing 6.0.0.0.0 media pack can be installed on the following supported platforms:

- AIX (64-bit)
- Microsoft Windows (64-bit)
- Linux (64-bit)

The media pack includes multiple packages. For more information, refer to the **Media Pack Contents** section in the *Oracle Revenue Management and Billing Version 6.0.0.0.0 Quick Installation Guide*.

To download the media packs:

1. Login to Oracle Software Delivery Cloud.
2. Select the **Release** option from the **All Categories** list.
3. Type Oracle Utilities Application Framework in the corresponding text box.
4. Click **Search**. A list of media packs appears in the search results.
5. Click the **Select** ( ) icon corresponding to the **Oracle Utilities Application Framework 4.5.0.1.1** media pack.
6. Similarly, repeat the steps from 3 to 5 to select the **Oracle Financial Services Revenue Management and Billing 6.0.0.0.0** media pack.
7. If required, you can verify the media pack which is selected by clicking the **View Items** link.
8. Click the **Continue** link. A page appears.
9. Select the required platform from the **Platforms/Languages** list.
10. Click **Continue**. A page appears with the license agreement.
11. Scroll and read the entire license agreement and then click the **I reviewed and accept the Oracle License Agreement** option.
12. Click **Continue**. The **File Download** page appears.
13. Ensure that all the packages in the media pack are selected and then click **Download**. An executable file is downloaded on your local machine.
14. Run the executable file. The **Oracle Download Manager** window appears.
15. Browse to the location where you want to download the packages and then click **Next**. The packages are downloaded on your local machine.

# Bug Fixes

The following table lists the bugs that are fixed in this release:

| Bug Number | Copy of (Base Bug) | Description |
|---|---|---|
| 35667066 | 35308265 | FWD PORT DEAL : CBPR CONFIGURATION IS IMPACTING OUR EXISTING CONFIGURATION. |
| 35666774 | 35503306 | 6.0 - DEV2 ORMB V5.0: DEAL PRICE ITEM GROUP SELECTION FILTERS ISSUE |
| 35666770 | 35509694 | 6.0 - PRICE ITEM PARAMETERS COLUMN UNDER TRANSACTION LEG INFORMATION SECTION IS MISSING IN 5.1. |
| 35666769 | 35532707 | 6.0 - C1-ODBCH BATCH IS FAILING DUE TO NULL POINTER EXCEPTION IN 5.1 |
| 35666766 | 35308265 | 6.0 - DEAL : CBPR CONFIGURATION IS IMPACTING OUR EXISTING CONFIGURATION. |
| 35666765 | 35497332 | 6.0 - 'DEV2 ORMB V5.0' C1-HRC BATCH TRIGGERING EMAIL TO ALL CLIENT MANAGERS |
| 35666764 | 35403092 | 6.0 - DEAL PRINT IN EXCEL FORMAT NOT WORKING |
| 35666763 | 35629786 | 6.0 - 5.1 UPGRADE: ISSUE IN CONSTRUCT CREATION SCREEN |
| 35666762 | 35526615 | 6.0 - DEV2 ORMB V5.0: DEAL PRICE ITEM GROUP SELECTION FILTERS ISSUE - REGRESSION |
| 35666221 | 35661594 | APAYDSFR BATCH ISSUE |
| 35663973 | 35509442 | DEAL MANAGEMENT : SPREAD PERCENTAGE NOT WORKING FOR FLAT AND TIER PRICING - FORWARD PORTING |
| 35625766 | 35308265 | FWD PORT DEAL : CBPR CONFIGURATION IS IMPACTING OUR EXISTING CONFIGURATION. |
| 35611344 | 35593360 | REFUND DETAILS ZONE DISPLAY ISSUE \|\| C1-REFUNDDTL - FORWARDPORT |
| 35608629 | 35425980 | FRT BASED BATCHES STILL CREATING UNWANTED INFO LOG(DEPENDENT BUG 35031045, 35016044, 34425783) |
| 35582560 | 35560257 | EUROCLEAR CLIENT ENVIRONMENT -BROADCAST BUTTON IS NOT WORKABLE ON 'TRANSACTION DETAILS' PORTAL |
| 35565692 | 35519271 | UPDATING ADDRESS LINE 1 IS FAILING IN EDIT REFUND REQUEST UI - FORWARDPORT |
| 35554200 | 35464951 | INDIA AB DEAL VERSION WITH WAIVER - ACOUNT WAIVER IS NOT EDITABLE |
| 35552331 | 35396809 | C1-BSEGD DOES IT DELETE DATA FROM C1_FT_EXT? |
| 35552316 | 35508335 | SAACT BATCH SETUP |
| 35552303 | 35393186 | C1-BSEGD TAKING LONGER TIME TO EXECUTE WHEN PROCESSING IN EXCESS OF 68K RECORDS |
| 35552279 | 35366413 | GBS \| ORMB 2.9.1 \| PRICING PARAMETERS NOT GETTING DISPLAYED IN UI |
| 35550236 | 35259681 | ISSUE WITH CLOSING THE APPROVAL TRANSACTION UI |

 

| Bug Number | Copy of (Base Bug) | Description |
|---|---|---|
| 35537086 | 35477377 | FIELD CONSTRUCT ID IS TOO LONG ERROR WHEN CANCELLING PRICING RULE APPROVAL WORKFLOW |
| 35535563 | 35476237 | DEV2 ORMB 5.0: BATCH JOB DETAIL DESCRIPTION SCREEN ISSUE |
| 35534391 | 35352523 | UPGRADE 5.0 :DEV2 : SCHEDULER JOB MONITOR DASH BOARD SCREEN ISSUE |
| 35531340 | 35309551 | FORWARDPORT BUG:UNABLE TO USE DEAL TYPE – BESPOKE ORCHESTRATION PRE/POST-PROCESSING SPOTS |
| 35531321 | 35441959 | DEAL MANAGEMENT: ISSUE ON SIMULATE BUTTON WHEN SCHEDULE IS BLANK |
| 35530195 | 35454529 | UNABLE TO FINALIZE THE DEAL - FORWARD PORTING |
| 35512868 | 35384433 | THIS ENTRY EXISTS ON TABLE FINANCIAL TRANSACTION - V60000 |
| 35512782 | 35482579 | DISAGGREGATION REQUEST INFORMATION IS SHOWING MULTIPLE ROWS OF THE SAME RECORD - FORWARDPORT |
| 35488092 | 35334478 | DISPUTE REQUEST UI DEFAULT SEARCH ISSUE |
| 35480114 | 35405908 | ORMB V5.0: NOT RECEIVING EMAIL NOTIFICATION ON BATCH COMPLETION |
| 35419059 | 35382911 | ACCOUNT PERSON ROUTING ENTRY - FORWARDPORT |
| 35390452 | 35364047 | ISB \| TIME COMPLEXITY OBSERVED IN COMMONUTILITIES_IMPL JAVA CLASS |
| 35390423 | 35329616 | ISB \| MULTIPLE SQL ID'S FOR ONE QUERY - NEEDS URGENT FIX |
| 35293719 | 35192847 | MULTIPLE BENEFITS ARE GETTING CREATED IN C1_BENEFITS TABLE FOR THE SAME PERIOD, NO CHANGE IN PREMIUM |
| 35670685 | 35311658 | MULTIPLE PL WITH SAME NAME ON ACCOUNT WHEN DEAL CREATED ON BOTH CUSTOMER AND ACCOUNT |
| 35626548 | 35543565 | DEAL IS NOT SIMULATING POST PRICING UPLOAD ACTION |
| 35621164 | 35532580 | FORWARDPORTBUG:PRICE LIST ASSIGN CHARACTERISTICS ARE NOT COPIED FROM DEAL ENTITY TO PROSPECT ENTITY DETAILS. |
| 35603374 | 34308436 | UNABLE TO STORE TAX RATE ON TRIAL BILL CHAR |
| 35597809 | 35303752 | PERFORMANCE ISSUES IN PRICE ASSIGNMENT CREATION USING FILE REQUEST TYPE. |
| 35597781 | 35471203 | BUG 35471203 - ORMB 5.1: OBSERVATION RELATED TO APPROVAL LOG UI |
| 35562269 | 35536441 | DEV2 ORMB 5.0V : CM_BAU_READ_ONLY USER GROUP ACCESS ISSUE |
| 35532192 | 35328532 | FEED MANAGEMENT DASHBOARD- ACCOUNT INFORMATION MAPPING AT 'TRANSACTION LEVEL INFORMATION' |
| 35531763 | 35435350 | ACCOUNT ID CACHING IN TXNIP |
| 35531736 | 35464048 | C1-TXNCU GETTING GENERICJDBCEXCEPTION INVALID COLUMN NAME ISSUE |
| 35531649 | 35374521 | IN RMB V5.1, ABLE TO CHANGE EFFECTIVE START DATE IN PL ASSIGNMENT IN ACCOUNT |

| Bug Number | Copy of (Base Bug) | Description |
|---|---|---|
| 35531550 | 35502560 | FORWARDPORTBUG:DEV2 ORMB V5.0: DEAL SIMULATION ERROR |
| 35526670 | 35332382 | REJECTALL BUTTON IS NOT WORKING ON USAGE DATA PROCESSING SCREEN |
| 35525930 | 35328638 | ERROR ENCOUNTERED DURING PAYMENT TRANSFER REQUEST FOR CERTAIN AMOUNTS 02 |
| 35525898 | 35354168 | TRYING TO UPLOAD THE BASE PAYMENT UPLOAD AND IT CAN ACCEPT ONLY 12 BYTES FOR TENDER ID |
| 35477035 | 35447584 | THE WEB SERVER DID NOT RESPOND CORRECTLY WHILE CREATING DEAL |
| 35472770 | 35369398 | UNABLE TO DELETE BILL SEGMENT USING CUSTOM CODE AS META DATA INCORRECT FOR THE TABLE C1_FT_DISTRIBUTION_LIST |
| 35468116 | 35435389 | GENERATING INVOICES WITH HIGH AMOUNT OF DATA THROUGH UI |
| 35390438 | 35362412 | ISB \| REPC1 NULL POINTER EXCEPTION OBSERVED |
| 35735461 | 35689078 | ISB QUERIES WITH TRIM IDENTIFIED IN DATABASE—FORWARDPORT |
| 35798635 | | DEAL MANAGEMENT: ROUNDING ISSUE |
| 35789458 | 35644821 | USAGE ACCOUNT OF ONE ACCESS GROUP ARE VISIBLE TO USER IN OTHER ACCESS GROUPS IN CUSTOMER 360 VIEW |
| 35814480 | 35741713 | LINK FOR TRANSACTION DETAILS IS FAILING AFTER 1ST TRANSACTION DETAILS IS EXPANDED |

 

# Known Issues

This section lists the known issues in Oracle Revenue Management and Billing Version 6.0.0.0.0 along with workarounds available to handle these issues. The known issues are grouped into the following categories:


- Framework
- Banking
- Insurance
- Documentation


## Framework

| Issue | **GETTING EXCEPTION ERROR MESSAGE ON "CONVERSION ENTITY" UI.** |
|---|---|
| Description | While viewing the details of a conversion entity, an exception error occurs in the **Duplicate Keys** zone of the **Conversion Entity Dashboard** screen. |
| Workaround | None |

| Issue | **SERVER ERROR OCCURRING AFTER DELETING A "MIGRATION REQUEST".** |
|---|---|
| Description | While deleting a migration request, a server error appears in the right panel even though the migration request is deleted from the system. |
| Workaround | None |

| Issue | **COLOR CONTRAST DOES NOT MEET ACCESSIBILITY REQUIREMENTS** |
|---|---|
| Description | At present, the application color contrast does not meet the accessibility guidelines. |
| Workaround | None |

| | |
|---|---|
| Issue | **GETTING EXCEPTION ERROR MESSAGE ON "MESSAGE" UI.** |
| Description | While searching using the percentage (%) symbol in the numeric fields (i.e. **Message Category From** and **Message Category To**), an exception error occurs instead of showing an appropriate error message in the **Message Search** zone. |
| Workaround | None |

# Banking

| | |
|---|---|
| Issue | **LOCALIZATION ISSUE WHEN MAKER AND CHECKER CHOOSE DIFFERENT LANGUAGES** |
| Description | When a maker and checker operate in different languages, a maker cannot see the approved transactions. |
| Workaround | Maker should login with a language that checker is using to see the approved transactions. |

| | |
|---|---|
| Issue | **FOREIGN KEY AND FILE LOCATION CHARACTERISTIC TYPE NOT SUPPORTED IN UI MAPS** |
| Description | The screens created using the UI map do not support the **Foreign Key Value** and **File Location Value** characteristic types. These screens only support the **Adhoc Value** and **Predefined Value** characteristic types. |
| Workaround | None |

| | |
|---|---|
| Issue | **MESSAGE DOES NOT APPEAR ON CLICKING BUTTONS IN LIST OF PRICE ASSIGNMENTS ZONE** |
| Description | On approving, rejecting, or canceling one or more price assignment requests (at once) from the **List of Price Assignments** zone, the appropriate message does not appear when you click the **Accept Changes**, **Return to Submitter**, or the **Revert to Original** button. |
| Workaround | None |

 

| | |
|---|---|
| Issue | **C1-TXCNC BATCH GETS EXECUTED SUCCESSFULLY EVEN IF C1-TXNCU BATCH FAILS** |
| Description | When you execute the C1-TXNCU batch with either of the following parameters during the cancellation process, an error occurs:<br>• Transaction Source<br>• Division<br>If you further execute the C1-TXCNC batch during the cancellation process, the status of all transactions in the feed is changed to Cancelled (CNCL). But, in this case, the SQIs on the billable charges are not accurate. |
| Workaround | None |

| | |
|---|---|
| Issue | **CONDITIONAL APPROVAL WORKFLOW CANNOT BE USED WHILE COPYING A PRICE LIST** |
| Description | The system allows you to define conditional approval workflow for business objects. However, at present the conditional approval workflow cannot be used while copying a price list. |
| Workaround | None |

| | |
|---|---|
| Issue | **BILLS GENERATED FOR THE MEMBER ACCOUNT AND NOT FOR THE MASTER ACCOUNT** |
| Description | If you add a contract to a member account after the account is added to the master account, the system will not duplicate the newly added contract at the master level. Therefore, in such scenarios, billable charges related to the newly added contract will be billed to the member account and not to the master account. |
| Workaround | You need to ensure that no new contracts are added to the member account after the account is added to the master account. |

| | |
|---|---|
| Issue | **INCORRECT RESULTS IF DISAGGREGATION BATCHES NOT EXECUTED IN SEQUENCE** |
| Description | During the transaction disaggregation process, you must execute the following batches in the specified order:<br>1. Identify Affected Transactions (C1-IAENT)<br>2. Process Non Aggregated Transactions (C1-PDTXN)<br>3. Clean Up (C1-TXNCU)<br>4. Update Disaggregation Request Status (C1-DARSU)<br>Otherwise, erroneous results might occur. |
| Workaround | None |

| | |
|---|---|
| Issue | **TWO CONCURRENT RUNS WHICH DERIVE SAME DIVISION FOR TRANSACTIONS DOES NOT WORK** |
| Description | If you execute a batch concurrently with two different divisions (for example, D1 and D2), the erroneous results might occur when transactions in both the runs derive the same division, account, and/or product combination. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR OCCURS WHEN YOU DISPLAY BILL FOR A PRODUCT THAT BELONGS TWO RELATIONSHIPS** |
| Description | If a product is added to two or more product to product relationships using the relationship type as Service, the system error occurs when you display bill for the product using Documaker. For example, if P3 is added in the P1 and P2 product relationship using the relationship type as Service, an error occurs when you display bill for P3 using Documaker. |
| Workaround | None |

 

| | |
|---|---|
| Issue | **ACTIVE CONSTRUCTS DETERMINED ON CUT-OFF DATE INSTEAD OF CHARGES START & END DATE** |
| Description | The system determines the active construct based on the cut-off date and bills the usage accounts' charges through an invoice account which is defined in the active construct. It does not determine the active construct based on the billable charge's start and end dates. |
| Workaround | None |

| | |
|---|---|
| Issue | **BILL SEGMENTS CREATED BUT FTS NOT CREATED WHEN ACCOUNTING CALENDAR NOT DEFINED** |
| Description | There might be situations when you generate bill segments for a pending bill which is created for a bill cycle whose accounting date either falls within the closed accounting calendar or does not fall within any accounting calendar. In such scenarios, the bill segments are generated, but the financial transactions are not created for the bill segments. An error occurs when you view such bills, whose financial transactions are not created, through the **Bill** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **STATUS OF ALL LEGS CHANGED TO ERROR IF EXCHANGE RATE NOT AVAILABLE FOR ONE LEG** |
| Description | If a transaction has multiple legs and the system could not find exchange rate for one of the leg while executing the C1-TXNSQ batch, the status of the transaction and all its transaction legs is changed to **Error**. |
| Workaround | None |

| | |
|---|---|
| Issue | **INCORRECT RESULTS APPEAR WHEN UNDERSCORE CHARACTER IS USED IN SEARCH CRITERIA** |
| Description | If you use the underscore (_) character in the search criteria, the system does not search strings with the underscore character. Instead, the system interprets the underscore (_) character as a wildcard character. |
| Workaround | None |

| | |
|---|---|
| Issue | **PAYMENT AMOUNT IS INCORRECT WHEN PAYMENTS HAVE FROZEN & OVERPAYMENT PAY SEGMENTS** |
| Description | If the payments have both frozen and overpayment pay segments, the payment amount displayed corresponding to the overpayment and frozen payment in the **Payments** zone of the **Remittance Summary** screen is incorrect. The system displays the total payment amount instead of displaying the overpayment and frozen pay segment amount. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR OCCURS WHEN BIND VARIABLES USED IN IN AND NOT IN CLAUSES WITHOUT BRACKETS** |
| Description | If a template is used in a construct for selecting usage accounts, billable charges, or adjustments where bind variables are used in the IN and NOT IN clauses without brackets, an error occurs when you bill an account through such construct. |
| Workaround | We recommend you to use bind variables within brackets in the IN and NOT IN clauses while defining a template. |

 

| | |
|---|---|
| Issue | **PARTIAL DATA UPLOADED WHEN USAGE RECORD HAS MORE THAN FIVE PASS THROUGH CHARGES** |
| Description | If you upload a usage record which has more than five pass through charges (for example, Bill Line 1, Bill Line 2, …., Bill Line 8), at present, the system uploads the details of only five pass through charges (i.e. till Bill Line 5). The details of Bill Line 6, Bill Line 7, …., and Bill Line 8 are not uploaded. |
| Workaround | None |

| | |
|---|---|
| Issue | **ADJUSTMENT CREATED WHEN CONTRACT ID IS VALID, BUT ACCOUNT IDENTIFIER IS INVALID** |
| Description | If you upload an adjustment data file with a record where the contract ID is valid, but the account ID or account identifier is invalid, the system creates the adjustment against the contract. Ideally, the system should not create the adjustment until and unless the contract ID, account ID, account identifier type, and account identifier are valid. |
| Workaround | None |

| | |
|---|---|
| Issue | **ABLE TO GENERATE A BILL FOR A SETTLEMENT ACCOUNT FROM THE BILL SCREEN** |
| Description | Ideally, the system should not allow you to generate a bill for a settlement account. However, at present, you can generate a bill for a settlement account from the **Bill** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **ADJUSTMENT CREATED AGAINST PREVIOUS BILL IS NOT CONSIDERED DURING TRIAL BILLING** |
| Description | If you create an adjustment against the previous completed bill, the adjustment is not presented on the next bill during trial billing. This open item accounting feature is not supported during trial billing. |
| Workaround | None |

| | |
|---|---|
| Issue | **REOPEN BUTTON DISABLED WHEN C1-BILLSETT ALGORITHM ATTACHED ON CUSTOMER CLASS** |
| Description | If you attach an algorithm of the C1-BILLSETT algorithm type on the **Bill Completion** system event of the account's customer class, at present, you will not be able to reopen a bill. |
| Workaround | None |
| Issue | **THE PAYMENT REQUEST SCREEN DOES NOT SUPPORT MULTIPLE TENDERS** |
| Description | At present, the system does not support multiple tenders when you create a payment from the **Payment Request** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **PERFORMANCE ISSUE ON CHANGING THE SEARCH BY FILTER OPTION** |
| Description | If you change the filter option from the **Search By** list, the system takes long time to load the respective query zone. You may observe this issue in many screens where the multi-query zone is used. |
| Workaround | None |

 

| | |
|---|---|
| Issue | **EFFECTIVE PRICING NOT VISIBLE IF C1_PER_REL HAS INVALID PERSON RELATIONSHIP TYPE** |
| Description | If you set the **Check on Feature Configuration** parameter in an algorithm which is created using the **C1-CUSRLALGT** algorithm type to **A** and add an invalid person relationship type in the **C1_PER_REL** feature configuration, the effective pricing is not inherited properly as expected. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR LOG FILES GENERATED ON EXECUTING BILLING AND C1-BLPPR BATCHES** |
| Description | In ORMB, the error log file is generated even when the following batches are executed successfully and bills are completed:<br>• BILLING<br>• C1-BLPPR |
| Workaround | None |

| | |
|---|---|
| Issue | **MANUAL DISTRIBUTION NOT WORKING IN THE PAYMENT SCREEN** |
| Description | On saving, the distributed amount is reset to zero when you manually distribute the tender amount among the unpaid bills in the **Payment** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR OCCURS ON EXECUTING BILLOPEN IF IN CLAUSE CONTAINS MULTIPLE BIND VARIABLES** |
| Description | If you have used template in a construct where IN clause has multiple bind variables, an error occurs while executing the **Construct Based - Pending Bill Generation (BILLOPEN)** batch. |
| Workaround | None |

 

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|---|---|
| Issue | **ELIGIBLITY CRITERIA ROW IS SKIPPED IF LEFT HAND SIDE PARAMETER IS NOT SPECIFIED** |
| Description | If the left hand side parameter is not specified in an eligibility criteria row while defining or editing a price item pricing, the eligibility criteria row is skipped and not saved in the system. |
| Workaround | None |

| | |
|---|---|
| Issue | **POST-PROCESSING BILL SEGMENT NOT REGENERATED WHEN YOU CLICK THE GENERATE BUTTON** |
| Description | An error occurs when you click the **Generate** button in the **Bill Segment** screen while regenerating the post-processing bill segment which is present on the pending bill. |
| Workaround | None |

| | |
|---|---|
| Issue | **RATE CALCULATED INCORRECTLY WHEN EXCHANGE RATE IS CHANGED DURING PRICING PERIOD** |
| Description | At present, the rate is calculated and persisted using the exchange rate which is effective on the price item pricing effective start date. Therefore, the persisted rate shown on the **Pricing (Account)** screen might be incorrect when the exchange rate is different on the date when the results are fetched on the **Pricing (Account)** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **ENTRY NOT CREATED IN THE CI_REPRC_ENTITY_DTL TABLE ON EDITING A PRICE LIST** |
| Description | If you edit the details of a price list which is assigned to an account or a person, an entry is not created in the CI_REPRC_ENTITY_DTL table. In other words, the repricing is not triggered on editing the details of a price list which is already assigned to an account or a person. |
| Workaround | None |

 

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|---|---|
| Issue | **UNABLE TO DEFINE PARAMETER FOR FIELDS WHICH BELONG TO CHILD TABLES** |
| Description | At present, the system does not list the fields of child tables in the **Source Type Code** field when you select the source entity as Account, Person, or Product while defining a parameter. Therefore, you cannot define a parameter for child table' fields and as a result, repricing is not triggered when you change the value of any child table' field. For example, when you change the main customer of an account, repricing is not triggered because the MAIN_CUST_SW field belongs to the child table named CI_ACCT_PER table for which you cannot define a parameter in the system. |
| Workaround | None |

| | |
|---|---|
| Issue | **RATE NOT PERSISTED ON PRICE ASSIGNMENT DATE WHEN C1-PRICEACCOUNT INVOKED MANUALLY** |
| Description | When you manually execute the C1-PriceAccount business service for an account, rate is calculated and persisted for the price item pricing available on the default and global price list on the date when the C1-PriceAccount business service is invoked. Ideally, the rate must be calculated and persisted on the price item pricing effective start date. |
| Workaround | None |

| | |
|---|---|
| Issue | **PERSISTED DATA NOT GETTING REFRESHED ON EDITING PRICE ASSIGNMENT** |
| Description | On editing a price item pricing, the rate is not properly recalculated and persisted when the details of a price component, such as rate, eligibility criteria, and so on are changed. |
| Workaround | None |

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|---|---|
| Issue | **PRICELIST EDIT VALIDATIONS NOT DEPENDENT ON ASSIGNMENT DATE OR ASSIGNMENT STATUS** |
| Description | Available and Eligible dates can be edited in Price List though Assignment Date or Assignment Status is added for price list. |
| Workaround | None |

| | |
|---|---|
| Issue | **STACKING IS NOT SUPPORTED FOR PRICE SIMULATION** |
| Description | Stacking is supported for bill generated through an Account. Pricing Simulation does not support stacking. |
| Workaround | None |

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|---|---|
| Issue | **ADJUSTMENT AMOUNT IS NOT PICKED UP FOR PAYMENT IN NEXT BILL** |
| Description | When you generate an Adjustment after a successful payment, the Adjustment amount is not picked up in the next bill that is generated and hence, payment is not created for the adjustment amount. |
| Workaround | None. |

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|---|---|
| Issue | **SPLIT AUTO PAY NOT AVAILABLE ON SETTLEMENT CONSTRUCT ACCOUNT CREATION SCREEN.** |
| Description | At present split auto pay is not supported on Settlement construct because Percentage field has to be added in Auto Pay Instructions section while creating a new account. |
| Workaround | None |

 

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|---|---|
| Issue | **SQL ERROR ON PRICE ASSIGNMENT SCREEN WITH ADHOC VALUE PASSED IN QUOTES.** |
| Description | At present SQL error is displayed in Price Assignment screen for parameter when adhoc value is added in quotes. Price Assignment should be successful though value added is in single quotes. |
| Workaround | None |

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|---|---|
| Issue | **BS ARE NOT GETTING PICKED FOR BATCH DATE AFTER BILLABLE CHARGE END DATE** |
| Description | At present, batch business date is later then billable charge date and C1_BILLGEN is not creating any BS, hence bill is not generated. |
| Workaround | None |

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|---|---|
| Issue | **RSDETAILS UPDATED INCORRECTLY WHEN PRICE COMPONENT FEES/RATE) PERSISTENCE EDITED** |
| Description | At present, rate schedule details after modification are displayed and not the details before editing. |
| Workaround | None |

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|---|---|
| Issue | **FEES RATE CALCULATION PRE-PROCESSING ALGORITHM ISSUE** |
| Description | Algorithm only considers the latest Service Quantity Identifier, it has to consider both Parameter and Service Quantity Identifier when calculating FEES and RATE. |
| Workaround | None |

| Issue | **C1-ACFEES BATCH RUN WITH PRICE ITEM CODE AS THE ONLY PARAMETER.** |
|---|---|
| Description | C1-ACFEES batch should consider records of price assignment where FEES for same should persist. |
| Workaround | None |

| Issue | **PRICE ASSIGNMENT TYPE - POST PROCESSING ISSUE IN FEES CALCULATION BATCH.** |
|---|---|
| Description | New value to be added in Price Assignment Type for post processing issue in FEES calculation batch. |
| Workaround | None |

| Issue | **C1-ACCOUNTFEES SERVICE ISSUE** |
|---|---|
| Description | At present FEES for price assignments are not persisted if any one price assignment eligibility rule results false and if no RATE found for same. |
| Workaround | None |

| Issue | **PAYMENT STATUS REMAINS INCOMPLETE AND NO PAYMENT SEGMENT IS GENERATED EVEN WHEN TENDER CONTROL ID IS GENERATED** |
|---|---|
| Description | For `On Extract Date', if one of the split auto payments goes in to error state, BALAPY batch generates Tender Control Id and Payment Status remains Incomplete and no Payment segment is generated. |
| Workaround | None |

 

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|---|---|
| Issue | **CHANGES MADE TO ACCOUNT ARE NOT UPDATED WHEN APPROVAL WORKFLOW IS ACTIVE FOR ACC** |
| Description | At present columns are not properly aligned and changes are not updated when Approval Workflow is Active. Changes done to account should be updated when approval workflow is active. |
| Workaround | None |

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|---|---|
| Issue | **INBOUND WEB SERVICE DOES NOT TRIM LEADING & TRAILING SPACES FROM INPUT PARAMETER** |
| Description | If you pass input parameters with leading and trailing spaces to an inbound web service, the inbound web service does not trim the leading and trailing spaces from the input parameters. |
| Workaround | None |

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|---|---|
| Issue | **IF USER ADDED DEFER AUTO PAY DATE ON ACCOUNT THEN AUTO PAY WILL NOT WORK** |
| Description | If you manually add the date in the **Defer Auto Pay Date** field, the automatic payment functionality will not work for the account. |
| Workaround | None |

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|---|---|
| Issue | **TOTAL OVERDUE AMOUNT IN ACCOUNT & PERSON DETAILS SECTIONS SHOW INCORRECT VALUE** |
| Description | If you manually include a bill in more than one active overdue process through the user interface, the amount shown in the **Total Overdue Amount** field is incorrect when you search for an overdue process using the Person or Account details in the **Delinquency Central** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **SEASONAL ADDRESS ID DOES NOT APPEAR IN THE BILL ROUTINGS TAB OF THE BILL SCREEN** |
| Description | At present, the seasonal address which is effective at the time of billing is considered for bill routing. You can view the seasonal address details in the **Bill Routings** tab of the **Bill** screen. However, the seasonal address ID does not appear corresponding to the **Address ID** field. |
| Workaround | None |

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|---|---|
| Issue | **ACCOUNT OVERRIDE ADDRESS IS NOT DELETED WHEN THE BILL ROUTING RECORD IS DELETED** |
| Description | Once you delete a bill routing record for a person from the **Account** screen where the **Address Source** field is set to **Account Override**, the corresponding account override address is not deleted from the system. You can still view the account override address on the screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR OCCURS ON USING A VALUE WITH HYPHEN FOR A CHARACTERISTIC TYPE** |
| Description | At present, an error occurs on a screen where a characteristic value with hyphen (-) is defined for a characteristic type. |
| Workaround | None |

 

| Issue | **AN ERROR OCCURS ON THE TEMPLATE SEARCH WINDOW** |
|---|---|
| Description | If you do not specify at least one account selection template while defining a construct, an error occurs indicating that at least one account selection template must be specified. Now, when you search for an account selection template using the **Search** icon corresponding to the respective field, the **Template Search** window appears with the same error (indicating that at least one account selection template must be specified). The system should not display any error in the **Template Search** window. |
| Workaround | None |

| Issue | **DISPUTE AMT AT BILL LEVEL INCORRECT WHEN BILL SEGMENT OF PREVIOUS BILL CANCELED** |
|---|---|
| Description | If a bill segment of the previous bill is canceled and you create a dispute request against an account for the corresponding next bill, the dispute amount displayed against the bill in the **Dispute Details** zone is incorrect. |
| Workaround | None |

| Issue | **SAVE BUTTON IS ENABLED WHEN A BILL IS IN THE COMPLETE OR CANCELED STATUS** |
|---|---|
| Description | The **Save** button in the **Page Title** area on the **Bill** screen should be disabled when a bill is in the **Complete** or **Canceled** status. However, at present, the **Save** button is enabled when a bill is in the **Complete** or **Canceled** status. |
| Workaround | None |

| | |
|---|---|
| Issue | **APAYCRET BATCH DOES NOT CONSIDER ECR ADJUSTMENTS CREATED ON PENDING BILL** |
| Description | You can only use an adjustment type where the **Print by Default** and **Impact Next Bill Balance** check boxes are not selected to create transfer adjustment while distributing earnings credit rate. Therefore, an ECR adjustment created against a pending bill is not stamped on the bill. As a result, the **Automatic Payment Creation (APAYCRET)** batch creates automatic payment for the bill without considering the ECR adjustment. |
| Workaround | None |

| | |
|---|---|
| Issue | **SINGLE MATCH EVENT CREATED WHEN MULTIPLE BILL SEGMENTS OF A CONTRACT ARE NETTED** |
| Description | At present, the system creates single match event for all bill segments of a contract which are netted. For example, there are two bill segments – BS1 (50$) and BS2 (-50$) of the C1 contract on a bill. In this case, the system nets the BS1 and BS2 because it results in zero contract balance, and then creates single match event for BS1 and BS2. |
| Workaround | None |

| | |
|---|---|
| Issue | **RECOGNITION SCHEDULE NOT GENERATED FOR BX/AX WHEN DRR FOR BS/AD DOES NOT EXIST** |
| Description | There might be situations when you have attached the **C1-REVRECSCH** algorithm to a contract's contract type for which bill segments and adjustments are already generated. Now, if already generated bill segments or adjustments are canceled, the system will generate the deferred revenue recognition for BX and AX even if the deferred revenue recognition does not exist for the corresponding BS and AD. But, the recognition schedule is not generated. You cannot even edit the recognition schedule of a deferred revenue recognition which is created for BX and AX. |
| Workaround | None |

 

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|---|---|
| Issue | **AUTO PAY ID IS NOT UPDATED WHEN A REOPENED BILL IS COMPLETED** |
| Description | When you reopen and complete a bill, the bill's due date is recalculated. On completing a reopened bill, the system does not check whether there are rule based auto pay instructions for the account which are effective on the latest bill due date. In other words, the system does not update the auto pay ID against the financial transactions in the **C1_FT_EXT** table. In addition, the entries in the **CI_BILL_ACH** table are not updated. |
| Workaround | None |

| | |
|---|---|
| Issue | **CUSTOMER SIMULATION NOT WORKING FOR CUSTOMER HAVING LARGE DATA** |
| Description | If a customer has large number of accounts in its hierarchy or if there are large number of billable charges for distinct price items, the corresponding prospect hierarchy will not be created successfully when you create a deal for the customer using the simulation type as **Customer**. |
| Workaround | Create a deal for such customers using the simulation type as **Deal** |

| | |
|---|---|
| Issue | **INCORRECT AVG PRICE AND COST CALCULATION WHEN VOLUME/COMMITEMENT HAVE MULTIPLE SQIS** |
| Description | The system calculates the average price and cost incorrectly when there are multiple SQIs in the SQI-based billable charges. |
| Workaround | None |

| | |
|---|---|
| Issue | **HIERARCHY UI-APPROVED PRICE ITEMS GETTING UNAPPROVED AGAIN IF RM CHANGES THE PRICING AND DOES THE SIMULATION AGAIN** |
| Description | If an approver request the submitter to resubmit the deal for approval and if the submitter makes any changes in the pricing for a price item, the system should only change the status of the price item to **Pending for Approval** while simulating the deal. But, the system changes the status of all price items in the deal to **Pending for Approval**. |
| Workaround | None |

| | |
|---|---|
| Issue | **DEAL END DATE IS NOT CONSIDERED FOR PRICE ASSIGNMENT PRICELIST ASSIGNMENT AND PRODUCT ENROLLMENT** |
| Description | In the **Apply Back** feature, the system does not use the deal end date while creating price assignments, price list assignments, and product enrollments. |
| Workaround | None |

| | |
|---|---|
| Issue | **SAME ORASEARCH ZONE APPEARS FOR MULTIPLE BIND VARIABLES WHILE DEFINING CONSTRUCT** |
| Description | If a template has multiple bind variables and zone is specified for two or more bind variables, the system displays the same OraSearch window for all bind variables when you define a criteria in a construct. It shows the OraSearch zone of the bind variable which is added first in the template. |
| Workaround | None |

 

| Issue | **INCONSISTENT DATA LENGTH FOR SRCH_CHAR_VAL AND ADHOC_CHAR_VAL** |
|---|---|
| Description | At present, the **ADHOC_CHAR_VAL** and **SRCH_CHAR_VAL** columns have different column length. The **SRCH_CHAR_VAL** column can only store 50 characters. Therefore, an adhoc characteristic value above 50 characters is truncated and then stored in the **SRCH_CHAR_VAL** column. As a result, erroneous results appear when you search for an entity using a string from an adhoc characteristic value which is beyond 50 characters. |
| Workaround | None |

| Issue | **ORASEARCH ICON FOR FK REF CHAR TYPE IS DISABLED IN AWB SCREENS** |
|---|---|
| Description | At present, the **Search** icon in the **Characteristic Value** column is disabled when you select a foreign key value characteristic type in the screens which are designed using the Application Workbench (AWB). |
| Workaround | None |

| Issue | **Original and Proposed Revenue Not Calculated Correctly** |
|---|---|
| Description | At present, the original and proposed revenue of a price item are not calculated properly due to some rounding issue in the rate schedule API. Therefore, the average price of each price item, revenue of each account and customer, revenue from each product, division, and deal, and revenue variation calculated in a deal are not accurate. |
| Workaround | None |

| Issue | **ON APPLY BACK THROWING DUPLICATE KEY ERROR** |
|---|---|
| Description | If a deal of an entity is already in the **Fully Orchestrated** status and you create another deal for the same entity, the system throws duplicate key error when you apply back the subsequent deal. |
| Workaround | None |

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|---|---|
| Issue | **INCORRECT PROPOSED TRANSACTION VOLUME GETTING EXPORT IN PRINT DEAL PDF FORMAT** |
| Description | If the default commitments are defined in a deal type, the system fetches default commitments for a price item and parameter combination even if the proposed commitments are available for the price item and parameter combination while extracting the details of the respective deals in the PDF format. |
| Workaround | None |

| | |
|---|---|
| Issue | **ON DEAL CREATION IF WE REFERUSAGE FROM ANOTHER DEAL WHICH HAVE BILLABLE CHARGE ON ACCOUNT THEN COPING INCORRECT COMMITMENT I.E. TWICE OF ORIGINAL VOLUME** |
| Description | While referring usage from another deal, the proposed commitments for a price item and parameter combination are copied incorrectly (i.e. twice the original volume). |
| Workaround | None |

| | |
|---|---|
| Issue | **UNABLE TO READ OUT THE CUSTOMER OR ACCOUNT ID IN NUMBERS** |
| Description | While using the Speech to Text facility in the Chatbot window, we need to read out the account or customer ID in words. For example, the customer ID 1337049295 should be read out as One Billion Three Hundred Thirty-Seven Million Forty-Nine Thousand Two Hundred Ninety-Five and not as One Three Three Seven Zero Four Nine Two Nine Five. Otherwise, erroneous results might occur. |
| Workaround | None |

 

# Insurance

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|---|---|
| Issue | **OLD INSURANCE FEATURES ARE NOT TESTED AND VERIFIED IN ORMB VERSION 6.0.0.0.0** |
| Description | In this release, the new policy data model is introduced. The old policy data model which is accessible to the INADMIN user group is no longer operational. The old insurance features, such as Insurance Control Central, Deferred Revenue Recognition, Account Current, Pay Plan, Group Billing, and List Bill Reconciliation are not tested and verified with the new policy data model. |
| Workaround | None |

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|---|---|
| Issue | **PERFORMANCE ISSUE WHILE CREATING DEFERRED REVENUE RECOGNITION SCHEDULE** |
| Description | If there are large number of bill segments and adjustments for which deferred revenue recognition schedule must be generated, the system takes long time to generate deferred revenue recognition schedules. |
| Workaround | None |

| | |
|---|---|
| Issue | **VALIDATION FOR FIDUCIARY CONTRACT MISSING DURING RECONCILIATION** |
| Description | While changing the status of the reconciliation object to Ready To Pay, the system does not validate whether fiduciary contract exists for the group account. |
| Workaround | You need to ensure that group customer has fiduciary contract associated with the account through which payments can be made for the list bills. |

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|---|---|
| Issue | **TWO BILL SEGMENTS GENERATED WHEN REASON CODE EFFECTIVE DATE IS SAME AS BILL SEGMENT START DATE** |
| Description | When you select the Update option from the Reason Code list and specify the reason code effective date same as the bill segment start date, the system creates two bill segments – one with prorated billed amount and another with prorated reported amount. Ideally, the system should only create one bill segment with prorated reported amount. |
| Workaround | None |

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|---|---|
| Issue | **UNABLE TO DISTRIBUTE THE REMAINING PAYMENT MANUALLY** |
| Description | If you have distributed partial payment automatically through the **Payment by Transaction** screen, the system does not allow you to distribute the remaining payment manually. |
| Workaround | None |

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|---|---|
| Issue | **FOREIGN KEY AND FILE LOCATION CHARACTERISTIC TYPE NOT SUPPORTED IN UI MAPS** |
| Description | The screens created using the UI map do not support the **Foreign Key Value** and **File Location Value** characteristic types. These screens only support the **Adhoc Value** and **Predefined Value** characteristic types. |
| Workaround | None |

| | |
|---|---|
| Issue | **CHARACTERISTIC TYPES ARE NOT FILTERED BASED ON THE REASON CODE** |
| Description | While editing the reconciliation object line, the characteristic types are not filtered based on the reason code that you have selected. Currently, it lists all characteristic types where the characteristic entity is set to **Reason Code**. |
| Workaround | None |

 

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|---|---|
| Issue | **RECONCILIATION DOESN'T WORK PROPERLY FOR PASS THROUGH BILLABLE CHARGES** |
| Description | In the sample case workflow, the system checks whether the difference between the reported and billed amounts is within the tolerance limit. If so, the system must change the status of the reconciliation object line to **WD-Match**. However, at present, in case of pass through billable charges, the system changes the status of the reconciliation object line to **Manual** instead of **WD-Match**. |
| Workaround | None |

| | |
|---|---|
| Issue | **ERROR OCCURS WHEN YOU RESOLVE A RECONCILIATION OBJECT LINE FROM THE CASE SCREEN** |
| Description | The system allows you to manually resolve a reconciliation object line from the **Case** screen and change the status of the reconciliation object line to **Manual Match**. At present, an error occurs when you click the **Manual Match** button in the **Case** screen. |
| Workaround | None |

| | |
|---|---|
| Issue | **OVERRIDE DESCRIPTION APPEARS INSTEAD OF DESCRIPTION IN THE SOURCE SYSTEM LIST** |
| Description | At present, the override description of the source system appears in the **Source System** list instead of the description when you select the **Policy** option from the **Search By** list in the **Customer 360-Degree View** screen. |
| Workaround | None |

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|---|---|
| Issue | **UNABLE TO SELECT AUDIT EVENT TYPE IN PRT WHEN UPDATE ALL IS CONFIGURED IN AET** |
| Description | At present, you cannot use an audit event type of the C1-Membership and C1_PERSON_BO business objects in the Age Based and Tier Based pricing rule types when the **Update All** option is selected in the audit event type. |
| Workaround | Therefore, we recommend you to select an audit event type of the C1-Membership and C1_PERSON_BO business objects where the **Update All** option is not selected. |

# Documentation

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|---|---|
| Issue | **"ERROR 500--INTERNAL SERVER ERROR" - ONLINE HELP IS NOT WORKING** |
| Description | At present, an error occurs when you access online help for the following screens:<br>• Account Current<br>• COBOL Program<br>• Collection Control Central<br>• Contract Type - Charge Type Mapping<br>• Contract Type - Pay Plan Template Mapping<br>• External Statement<br>• FK Validation Summary<br>• Pay Plan Template<br>• Policy (P&C)<br>• Reason Code<br>• Reconciliation Object<br>• Reconciliation Object Line Status<br>• Unit of Measure |
| Workaround | None |

 

| Issue | **ONLINE HELP NOT AVAILABLE FOR SOME SCREENS OR TABS** |
|---|---|
| Description | At present, the online help is not available for the following screens:<br>• Collection Type<br>• Request<br>In addition, the online help is not available for the following tabs:<br>• Rate Schedule – SQ Rule Tab |
| Workaround | None |

# Technical Support

For any technical support, consult with Oracle Support, Oracle Partner, or Oracle Consulting that may be supporting your implementation and upgrade process.

 