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About this Document

This document describes the new features, enhancements, UI 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	Description
<i>Oracle Utilities Application Framework Business Process Guide</i>	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 describes 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.
<i>Oracle Utilities Application Framework Administrative Guide</i>	Lists and describes various features, options, and tools available in Oracle Utilities Application Framework (OUAF). It also explains how to implement the business requirements using these features, options, and tools in Oracle Revenue Management and Billing.
<i>Oracle Revenue Management and Billing Business Process Guide</i>	Lists and describes various features available in the system which can be used in both the financial services and insurance domains.
<i>Oracle Revenue Management and Billing Administrative Guide</i>	Lists and describes the various feature-specific options that the system administrator or the implementation team has to configure in order to use the system.
<i>Oracle Revenue Management and Billing Banking User Guide</i>	Lists and describes various banking features in Oracle Revenue Management and Billing. It also describes all screens related to these features and explains how to perform various tasks in the application.
<i>Oracle Revenue Management and Billing Insurance User Guide</i>	Lists and describes various insurance features in Oracle Revenue Management and Billing. It also describes all screens related to these features and explains how to perform various tasks in the application.
<i>Oracle Revenue Management and Billing Installation Guide</i>	Lists the application server pre-requisites, supported platforms, and software and hardware requirements for installing the Oracle Revenue Management and Billing

Document	Description
	application. It explains how to install the Oracle Revenue Management and Billing application.
<i>Oracle Revenue Management and Billing Quick Installation Guide</i>	Provides high-level information on how to install the Oracle Revenue Management and Billing (ORMB) application and selected additional software.
<i>Oracle Revenue Management and Billing Database Administrator's Guide</i>	Provides information about the Oracle Database Server and Client required for installing the Oracle Revenue Management and Billing database. It explains how to install database with and without demo data. It provides database configuration guidelines including recommended settings for the Oracle Exadata Database machine.
<i>Oracle Revenue Management and Billing Server Administration Guide</i>	Explains the Oracle Revenue Management and Billing (ORMB) architecture and technical know-how required for configuring and using the ORMB application. It explains how to configure and deploy web and business application servers. In addition, it explains how to monitor client machines, web and/or business application servers, and database connections.
<i>Oracle Revenue Management and Billing Security Guide</i>	Lists the security features available in the Oracle Revenue Management and Billing application. It explains how to configure security for the Oracle Revenue Management and Billing application using the default security features.
<i>ORMB - Transaction Feed Management - Batch Execution Guide</i>	Describes the sequence in which the batches must be executed while performing various tasks in the Transaction Feed Management module.
<i>Oracle Revenue Management and Billing Batch Guide</i>	Lists and describes various ORMB batches.
<i>Oracle Revenue Management and Billing Upgrade Guide</i>	Explains how to upgrade the Oracle Revenue Management and Billing framework, application, and its database.
<i>Oracle Revenue Management and Billing Upgrade Path Guide</i>	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.
<i>Oracle Revenue Management and Billing Pricing Services</i>	Lists and describes the inbound web services related to the Pricing module. It also explains the pre-requisites, input parameters, and output parameters of these inbound web services.

Change Log

Revision	Last Update	Updated Section	Comments
1.1	22-Jan-2021	Membership Repricing through Inbound Web Service	Updated Information
		COBRA Membership	Updated Information
		Administration Fee Pricing for COBRA Membership	Updated Information
		Medicare Membership	Updated Information
		Medicare Part D LIS and LEP Pricing	Updated Information
		Premium Proration Rules	Updated Information
		9/10 Billing (Skip Months)	Updated Information
		Self-Funded Pricing Rule Versioning	Updated Information
		Health Care Inbound Message	Updated Information
		Health Insurance Policy	Updated Information
		Bill Group Derivation	Updated Information
		Age Based and Tier Based Pricing Rule Types	Updated Information
1.2	08-Feb-2021	Deprecation Notices for ORMB Version 2.9.0.1.0	Updated Information
1.3	12-Apr-2021	Suppressing Extraction for Zero or Negligible Amount Bills	Updated Information
		Geographic Rating Area Pricing Parameter	Updated Information
		COBRA Membership	Updated Information
		Medicare Membership	Updated Information
		C1-ASOBLLNG Feature Configuration	Updated Information
		User Interface (UI) Level Changes	Updated Information
1.4	18-Jan-2022	-	Added Bookmarks in PDF
1.5	21-Mar-2022	Deal Monitoring	Updated Information
		Considering Pass Through Charges in Original Revenue	Updated Information
		Considering SQI Based Billable Charges for Calculating Commitments	Updated Information

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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 2.9.0.1.0, 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 2.9.0.0.0 will not happen successfully.
- Transactions which are uploaded using 2.9.0.0.0 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 or value. Otherwise, erroneous results might occur.

New Features (Generic)

This section describes the following new features added in this release which can be used in both financial services and insurance domains:

- [Inbound Web Service History](#)
- [Adjustment Creation, Cancellation, and View through Inbound Web Service](#)
- [Auto Pay Instruction Addition, Modification, Deletion, and View through Inbound Web Service](#)
- [Payment Creation, Transfer, Cancellation, and View through Inbound Web Service](#)
- [Suppressing Extraction for Zero or Negligible Amount Bills](#)
- [Extract Template](#)

Inbound Web Service History

Oracle Revenue Management and Billing enables you to track the response sent through an inbound web service to the external system using the **Inbound Web Service History** feature. To enable the **Inbound Web Service History** feature, you need to create an algorithm using the **C1-IWSHIST** algorithm type and attach it to the **Web Service History** system event in the installation options. You need to specify an outbound message type, using which the outbound message should be created, in the **Outbound Message Type** parameter of the **C1-IWSHIST** algorithm.

If the **Inbound Web Service History** feature is enabled, the system creates an outbound message when the response is sent through an inbound web service. The details of the outbound message, request (in the XML format), and response (in the XML format) are stored in the **F1_OUTMSG** table. In addition, it creates a history record in the **C1_IWS_HIST** table. The inbound web service history record indicates the following:

- Outbound message which is created for the external system, external transaction ID, and/or external source ID combination
- Business service due to which the outbound message is created
- Entity on which the action is performed through the business service

The entity type is stored along with the entity corresponding to the record in the **C1_IWS_HIST** table. At present, the following entity types are added in the **RMB_ENTITY_TYPE_FLG** lookup field:

- Account
- Adjustment
- Bill
- Contract Type
- Contract
- Membership
- Payment

If you want to use the **Inbound Web Service History** feature for any custom inbound web service, you need to ensure that the respective entity type is added in the **RMB_ENTITY_TYPE_FLG** lookup field.

Adjustment Creation, Cancellation, and View through Inbound Web Service

Oracle Revenue Management and Billing enables you to create, cancel, and view adjustments through a web service. You can send the adjustment creation, adjustment cancellation, or adjustment view request from the external system through an inbound web service. The following three business services are shipped with the product to support different adjustment operations:

Business Service	Description
C1-CreateAdjustment	<p>Used to create an adjustment against a contract. You can create both the calculated and non-calculated adjustments against a contract. You can specify either of the following match types while sending the adjustment creation request:</p> <ul style="list-style-type: none"> • Contract • Contract Type <p>If you specify a contract type as the match type, you need to specify either of the following in the adjustment creation request:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>On processing the adjustment creation request, the system creates an adjustment using the specified adjustment type. If an approval profile is set in the adjustment type, the system creates the adjustment in the Freezable status. It also creates an approval request for the adjustment. However, if an approval profile is not set in the adjustment type, the system creates the adjustment in the Freezable or Frozen status depending on the adjustment freeze option set in the adjustment type. Note that the system creates an adjustment against the contract only when it is in the Active status.</p>
C1-CancelAdjustment	<p>Used to cancel an adjustment. You need to specify an adjustment cancel reason in the adjustment cancellation request. On processing the adjustment cancellation request, the system cancels the adjustment and changes the status of the adjustment to Cancelled.</p>

Business Service	Description
C1-GetAdjustmentHistory	<p>Used to view the adjustments of an account. While sending the adjustment view request, you need to specify either of the following:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>You can specify various criteria (such as, bill ID, adjustment type, contract type, adjustment status, adjustment creation date range) along with the account details to filter the list of adjustments. You can specify the maximum number of records that can be retrieved through the C1-GetAdjustmentHistory business service in the Set Fetch Record Limit option type of the C1-RECLMT feature configuration. Accordingly, the system lists the number of adjustments in the adjustment view response. For example, if the value in the Set Fetch Record Limit option type is set to 100 and the result set contains 125 adjustments, the system will list only 100 adjustments of the account from the result set in the descending order of the creation date.</p>

The system enables you to track the adjustment creation, adjustment cancellation, and adjustment view responses sent to the external system using the **Inbound Web Service History** feature.

We have not shipped any inbound web service with the product. You can create one inbound web service which supports all three operations — adjustment creation, adjustment cancellation, and adjustment view. Alternatively, you can create three inbound web services — one for adjustment creation, another for adjustment cancellation, and third for adjustment view.

You can create a SOAP or REST based inbound web service. If you want to send the request in the XML and/or JSON format, you need to ensure that you create a REST based inbound web service. However, if you want to send the request in the XML format, you can create a SOAP or REST based inbound web service.

Auto Pay Instruction Addition, Modification, Deletion, and View through Inbound Web Service

Oracle Revenue Management and Billing enables you to define, edit, delete, and view auto pay instructions of an account through a web service. You can send the auto pay addition/modification, auto pay deletion, or auto pay view request from the external system through an inbound web service. The following three business services are shipped with the product to support different auto pay instruction operations:

Business Service	Description
C1-AddUpdateAutoPayService	<p>Used to define or edit an auto pay instruction of an account. While sending the auto pay addition/modification request, you need to specify either of the following:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>On processing the auto pay addition/modification request, the system first searches whether the auto pay instruction already exists for the account in the system. If so, the system edits the existing auto pay instruction of the account. If the auto pay instruction does not exist for the account, the system adds the auto pay instruction for the account.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Note: The system searches for an auto pay instruction either using the auto pay ID or using the start date, auto pay source, auto pay route type, priority, and external account number combination.</p> </div> <p>The system enables you to define or edit an auto pay instruction of an account through the web service only when the Rule Based Auto Pay option is not selected for the account. The approval workflow process is supported through the web service only when you create or edit one auto pay instruction for an account and not when you create or edit multiple auto pay instructions or split auto pay instruction for an account.</p> <p>You can also create split auto pay instructions for an account through the web service. However, you need to ensure that split auto pay instructions with the same start date, end date, and priority computes to 100% in the request.</p>

Business Service	Description
C1-DeleteAutoPayService	<p>Used to delete an auto pay instruction of an account. While sending the auto pay deletion request, you need to specify either of the following:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>On processing the auto pay deletion request, the system deletes an auto pay instruction of the account. If you specify the account details, the system deletes all auto pay instructions of the account. And, if you specify the auto pay ID, the system deletes the respective auto pay instruction of the account. Note that the system deletes an auto pay instruction of the account only when it is not yet used in the system.</p>
C1- ViewAutoPayService	<p>Used to view the auto pay instructions of an account. While sending the auto pay view request, you need to specify either of the following:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>You can specify various criteria (such as, start date and auto pay source) along with the account details to filter the list of auto pay instructions.</p>

The system enables you to track the auto pay addition/modification, auto pay deletion, and auto pay view responses sent to the external system using the **Inbound Web Service History** feature.

We have not shipped any inbound web service with the product. You can create one inbound web service which supports all three operations — auto pay addition/modification, auto pay deletion, and auto pay view. Alternatively, you can create three inbound web services — one for auto pay addition/modification, another for auto pay deletion, and third for auto pay view.

You can create a SOAP or REST based inbound web service. If you want to send the request in the XML and/or JSON format, you need to ensure that you create a REST based inbound web service. However, if you want to send the request in the XML format, you can create a SOAP or REST based inbound web service.

Payment Creation, Transfer, Cancellation, and View through Inbound Web Service

Oracle Revenue Management and Billing enables you to create, transfer, cancel, and view payments through a web service. You can send the payment creation, payment transfer, payment cancellation, or payment view request from the external system through an inbound web service. The following four business services are shipped with the product to support different payment operations:

Business Service	Description
C1-CreatePaymentService	<p>Used to create payments for an account. While sending the payment creation request, you need to specify either of the following of the payor and payee accounts:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>The system enables you to create a payment through the web service using either of the following match types:</p> <ul style="list-style-type: none"> • Bill • Contract <p>You can specify maximum four tender types along with the amount. You can specify maximum four characteristics for payment tender and maximum five characteristics for payment.</p> <p>On processing the payment creation request, the system calculates the sum of tender amount and sets it as the payment amount. It creates the payment event and payments. The payments are immediately distributed and frozen. It also creates a payment tender for each tender type.</p> <p>If the number of bill segments in a bill exceeds the bill segment count specified in the C1_PAYBYBTCH feature configuration, the system distributes and freezes the payments in the deferred mode and not in real time (i.e. immediately). The system creates a batch job using the C1-PAYBT batch and accordingly sends the response to the external system.</p>
C1-CancelPaymentService	<p>Used to cancel a payment or all payments of a payment event. While sending the payment cancellation request, you can specify either of the following cancellation types:</p> <ul style="list-style-type: none"> • T – Used to indicate that you want to cancel all payments of a payment event along with its payment tenders.

Business Service	Description
	<ul style="list-style-type: none"> • P – Used to indicate that you want to cancel a particular payment. <p>On processing the payment cancellation request, the system cancels the payment and changes the status of the payment to Cancelled.</p>
C1-TransferPaymentService	<p>Used to transfer a payment or all payments of a payment event. While sending the payment transfer request, you can specify either of the following transfer types:</p> <ul style="list-style-type: none"> • E – Used to indicate that you want to transfer all frozen payments of a payment event. • P – Used to indicate that you want to transfer a particular payment. <p>The system enables you to transfer a payment through the web service using either of the following match types:</p> <ul style="list-style-type: none"> • Bill • Contract <p>You need to specify a reason why you want to transfer a payment. On processing the payment transfer request, the system cancels the old payment and creates a new payment on the payment event in the Frozen status.</p>
C1-ViewPaymentService	<p>Used to view the payments of an account. While sending the payment view request, you need to specify either of the following:</p> <ul style="list-style-type: none"> • Account ID • Account Identifier Type, Account Identifier, and Division <p>You can specify various criteria (such as, tender type, check number, payment creation date range) along with the account details to filter the list of payments. You can specify the maximum number of records that can be retrieved through the C1-ViewPaymentService business service in the Set Fetch Record Limit option type of the C1-RECLMT feature configuration. Accordingly, the system lists the number of payments in the payment view response. For example, if the value in the Set Fetch Record Limit option type is set to 100 and the result set contains 125 payments, the system will list only 100 payments of the account from the result set in the descending order of the creation date.</p>

The system enables you to track the payment creation, payment transfer, payment cancellation, and payment view responses sent to the external system using the **Inbound Web Service History** feature.

We have not shipped any inbound web service with the product. You can create one inbound web service which supports all four operations — payment creation, payment transfer, payment cancellation, and payment view. Alternatively, you can create four inbound web services — one for payment creation, second for payment transfer, third for payment cancellation, and fourth for payment view.

You can create a SOAP or REST based inbound web service. If you want to send the request in the XML and/or JSON format, you need to ensure that you create a REST based inbound web service. However, if you want to send the request in the XML format, you can create a SOAP or REST based inbound web service.

Suppressing Extraction for Zero or Negligible Amount Bills

Oracle Revenue Management and Billing enables you to suppress the extraction process for bills when the bill amount is zero or within the tolerance limit. This feature helps to reduce the cost spent on sending zero or negligible amount bills to customers.

To enable this feature for an account, you need to create an algorithm using the **C1-SUPPBILLS** algorithm type and attach it to the **Post-Bill Completion** system event of the respective customer class. This algorithm contains the following parameters:

- **Consider Threshold Limit** – Used to indicate whether you want to suppress the extraction of bills when the bill amount is within the threshold limit. The valid values are:
 - **Y** - Used to indicate that you want to suppress the extraction of bills when the bill amount is within the threshold limit.
 - **N** - Used to indicate that you want to suppress the extraction of only those bills where the bill amount is zero.

This parameter is mandatory.

- **Routing Threshold Debit Amount** – Used to specify the debit threshold amount. The value can be zero or a positive integer. This parameter is required when the **Consider Threshold Limit** parameter is set to **Y**.
- **Routing Threshold Credit Amount** - Used to specify the credit threshold amount. The value can be a negative integer. This parameter is required when the **Consider Threshold Limit** parameter is set to **Y**.
- **Consider Ledger Impact** – Used to indicate whether you want to suppress the extraction of bills when the GL entry does not exist for the bill. The valid values are:
 - **Y** – Used to indicate that you do not want to suppress the extraction of bills when the GL entry exists for the bill.
 - **N** - Used to indicate that you want to suppress the extraction of bills when the GL entry exists for the bill.

This parameter is mandatory.

- **Routing Type To Be Suppressed** – Used to indicate the bill route type for which you want to suppress the extraction of bills. You can specify multiple bill route types separated by a comma. If you do not specify the value for this parameter, the system will suppress the extraction of bills for all bill route types when this algorithm is attached on the customer class.

Based on the above parameters defined in the algorithm, the system decides whether the bill must be suppressed for the bill routing. If a bill must be suppressed for the extraction process, the algorithm will select the **Do Not Extract** option for the required bill routing on bill completion.

For example, if you set the following values in this algorithm:

Consider Threshold Limit – Y

Routing Threshold Debit Amount - 5

Routing Threshold Credit Amount - -5

Consider Ledger Impact – Y

Routing Type To Be Suppressed - Postal

Then, the system will behave in the following manner:

Bill Amount	GL Exists	Select the Do No Extract Option
0	N	Y
0	Y	N
3	N	Y
3	Y	N
-4	N	Y
-4	Y	N
10	N	N
10	Y	N
-16	N	N
-16	Y	N

As mentioned above, the system will accordingly select the **Do No Extract** option for the Postal bill routing.

Note:

The system assumes that the debit and credit threshold amount are specified in the bill currency.

If required, you can deselect the **Do No Extract** option for a bill routing whenever required for a bill from the **Bill** screen.

Extract Template

Oracle Revenue Management and Billing enables you to extract any data from the system to a file in the predefined format using the **Extract Template** feature. An extract template helps the system to determine the following:

- **Date Time Format** - The standard format in which the date and time should be extracted to a file.
- **File Formats** – You can extract the data in the following supported file formats:
 - Comma Separated Values (CSV)
 - Extensible Markup Language (XML)
 - Fixed Position (PRN)

- JavaScript Object Notation (JSON)
- Pipe Separated Values (PSV)
- Tilde Separated Values (TSV)

Here, you can specify the following:

- Whether the root tag should be used in the XML or JSON file format
- Whether the data should be enclosed within quotes in the CSV, PSV, or TSV file format
- Whether the column header should displayed in the CSV, PSV, or TSV file format
- Whether the source XML structure should be used in the XML or JSON file format
- **Services** – Here, you can specify a list of business objects or business services using which you want to extract the data from the system.
- **Extract Record List** – Here, you can specify the XPath of list for which sequence or positions should be reserved based on given record count. This is applicable for the CSV, PRN, PSV, and TSV file formats.
- **Field Mapping** – Here, you can specify the following information:
 - Field or node name that you want to appear in the output file
 - XPath of the source field from where you want to extract the data
 - XPath of the target field in which the data should be extracted (applicable for the XML and JSON file formats)
 - Start and end positions of a particular field (applicable for the PRN file format)
 - Whether you want to extract the data in this field
 - Whether you want to edit the extracted data using the supported functions
 - Whether you want to override the date and time format of a field

A new screen named **Extract Template** is introduced in this release. It enables you to define, edit, copy, and delete an extract template.

We have shipped one extract template named **INVOICE_EXTRACT_TEMP** which helps to extract the bill data in different formats. A new algorithm type named **C1-BLEXTTMPL** and algorithm named **C1-BLEXTTMPL** are shipped with product. If you want to extract the bill data using the **INVOICE_EXTRACT_TEMP** extract template, you need to accordingly set the **Extract Template Code** parameter in the **C1-BLEXTTMPL** algorithm and then attach the **C1-BLEXTTMPL** algorithm to the **Extract Algorithm** system event of the required bill route type.

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.

- [Deal Monitoring](#)
- [Product Level Approval for Deals](#)
- [Recommended Pricing](#)
- [Deal Currency Conversion](#)
- [Reference Selection Based on Questionnaire](#)
- [Deal Dashboard](#)
- [Rate Negotiability for Price Item in Deal](#)
- [Deal Profitability Report](#)
- [Average Price Validation Using Floor and Ceil Limits](#)
- [Price List Simulation](#)
- [Considering Pass Through Charges in Original Revenue](#)
- [Considering Recurring Billable Charges for Calculating Commitments](#)
- [Considering Billable Charges Generated Through TFM in Deal](#)
- [Stacking Commitments in Deal](#)

Deal Monitoring

Oracle Revenue Management and Billing enables the relationship manager to assess the deal at regular intervals using the **Deal Monitoring** feature. On assessing a deal, the relationship manager can accordingly add the review comments for the deal.

The system sends the To Do reminders to the relationship manager at predefined intervals to review the deal. To send the To Do reminders for deal review, the system uses the following data specified in the respective deal type:

- **To Do Reminder Days** – Used to indicate the number of days using which the system calculates the To Do reminder date.
- **To Do High Priority Days** – Used to indicate the number of days using which the system calculates the date when the To Do reminder of highest priority should be sent.
- **Deal Monitor To Do Type** – Used to indicate the To Do type using which the To Do should be created for the deal review.

A new batch named **C1_DLMTR** is introduced in this release. It checks whether there are any deals in the **Fully Orchestrated** status. If there is a deal in the **Fully Orchestrated** status, the batch does the following:

- Calculates the review date and To Do reminder date for the deal
- Create a To Do for deal review and changes the status of the deal to **Pending For Review** when the To Do reminder date is equal to the system date

If the deal is not yet reviewed even once, the batch calculates the first review date using the deal effective start date and deal review frequency. For example, if there is a deal which is effective from 07-01-2020 to 12-31-2021 and where the deal review frequency is set to **Biannually**, the system sets the first review date to 01-01-2021 (i.e. 07-01-2020 + 6 months). However, if the deal is already reviewed in the past, the batch calculates the subsequent review date using the last review date and deal review frequency. For example, if there is a deal which is effective from 07-01-2020 to 12-31-2021 and where the last review date is set to 01-01-2021 and the deal review frequency is set to **Biannually**, the system sets the subsequent review date to 07-01-2021 (i.e. 01-01-2021 + 6 months). Note that if the calculated review date is later than the deal effective end date, then the batch sets the review date to the deal effective end date. For example, if there is a deal which is effective from 07-01-2020 to 12-31-2021 and where the last review date is set to 07-01-2021 and the deal review frequency is set to **Biannually**, the system sets the subsequent review date to 12-31-2021. This is because the calculated review date (i.e. 01-01-2022) is later than the deal effective end date (i.e. 12-31-2021).

In addition, the batch calculates the To Do reminder date which is review date minus the To Do reminder days. For example, if the review date is 12-31-2021 and To Do reminder days is 60, the system sets the To Do reminder date to 11-01-2021.

The **C1_DLMTR** batch contains the following parameters:

- Division
- Customer Segment
- Customer Tier
- Deal Type
- Thread Pool Name

For more information about the batch, refer to *Oracle Revenue Management and Billing Batch Guide*. On executing the **F1-TDCLP** batch, the system changes the priority of the To Do reminder using the following formula:

$(\text{To Do Reminder Days} - \text{To Do High Priority Days}) / \text{Number of Priority}$

For example,

To Do Reminder Days	90
To Do High Priority Days	30
To Do Reminder Date	01-April-20
Deal Review Date	30-June-20
Number of Priority	8

In this case, the system changes the priority of the To Do reminder after every 8 days (i.e. $(90-30)/8=7.5$) as mentioned in the below table:

System Date	Priority
1-April-2020	Lowest - Priority 9
9-April-2020	Priority 8
17-April-2020	Priority 7
25-April-2020	Priority 6
02-May-2020	Priority 5
10-May-2020	Priority 4
18-May-2020	Priority 3
26-May-2020	Priority 2
01-June-2020	Highest Priority 1

Note: The system changes the To Do priority from Priority 9 to Priority 1 where 9 is the lowest and 1 is the highest.

However, if the output of the above formula is zero, the system changes the priority of the To Do reminder every day. On clicking the **Review Deal** icon corresponding to the deal in the **Search Deal** zone of the **Deal Dashboard** screen, the **Deal Review** window appears. Note that the **Review Deal** icon appears only when the deal is in the **Pending For Review** status. Once the relationship manager assesses the deal and adds the review comments for the deal in the **Deal Review** window, the status of the deal is changed from **Pending For Review** to **Fully Orchestrated**.

Product Level Approval for Deals

Until now, the relationship manager could send one best version of the deal for the division and deal level approvals. Now, in addition, the relationship manager can send one best version of the deal for the product level approval when the following conditions are met:

- Customers or accounts in the deal have enrolled for the products
- **Product Level Approval Required** field is set to **Yes** in the respective deal type
- Deal approval profile is specified for the division and product combination in the respective deal type

The system enables you to design a deal approval profile for the product approval hierarchy. The deal approval profile of a product and division combination helps the system to determine:

- Different levels in the product approval hierarchy which can approve the price item pricing and financial summary of the product in the deal. Note that the product level approver can only approve the pricing of those price items which are included in the product.
- Whether the product level approver can recommend a new pricing for a price item while approving the deal.

- Whether the product level approver can request the respective price item manager to approve the pricing for the price item.
- Whether the product level approver can approve the deal.
- Whether the product level approver should only view those price items for approval for which floor and ceil limits are within his approval range.
- The minimum and maximum profitability, profit, profit variation, and revenue which the product level approver can approve in the deal.

In a deal type, you can now specify the approval profile for a division and product combination using the approval type as **Product**. If a product is associated to multiple divisions, you can specify the approval profile for each division and product combination. If a deal is created for a customer or prospect whose accounts belong to different divisions, but have enrolled for the same product, the system then creates a product approval hierarchy for each division and product combination. For example, if the SAVINGS product is associated to two divisions named CA and US and an approval profile is specified for both the combinations (i.e. SAVINGS and CA; SAVINGS and US) in the deal type, the system will create two product approval hierarchies when two accounts belonging to different divisions (i.e. CA and US) have enrolled for the SAVINGS product in a deal. One product approval hierarchy would be for the SAVINGS and US combination and another product approval hierarchy would be for the SAVINGS and CA combination. However, if the SAVINGS product is associated to two divisions named CA and US and an approval profile is specified only for the SAVINGS and CA combination in the deal type, the system will create one product approval hierarchy for the SAVINGS and CA combination. The system will not create product approval hierarchy for the SAVINGS and US combination because there is no approval profile configured for this combination in the deal type.

Note: You cannot specify the same approval profile for the same or different product and different division combination. However, you can specify the same approval profile for the different product and same division combination.

The system enables you to configure parallel approval at any level in the product approval hierarchy. If the **Product Level Approval Required** field is set to **Yes** and the **Division Level Approval Required** field is set to **Yes**, the system first sends the deal to the product approval hierarchy, then to the division approval hierarchy and finally to the deal approval hierarchy for approval. However, if the **Product Level Approval Required** field is set to **Yes** and the **Division Level Approval Required** field is set to **No**, the system first sends the deal to the product approval hierarchy and then to the deal approval hierarchy for approval.

If the **Product Level Approval Required** field is set to **Yes** in the deal type, the system creates a To Do for the approver at the first level in the product approval hierarchy. The approver can either approve the product-specific price item pricing and product financial summary or request the submitter to resubmit the deal for approval after making the required changes. If the approver at the first level in the product approval hierarchy approves the product-specific price item pricing and product financial summary, or if the approver at the first level in the product approval hierarchy cannot approve the product-specific price item pricing and product financial summary, the system creates a To Do for the approver at the next level in the product approval hierarchy. This process continues until the approval is received from all the levels in the product approval hierarchy.

Note that a product level approver can recommend a price for a price item which is included in the product when the **Propose Pricing** field is set to **Yes** for the approval level in the deal type. After recommending a new price (i.e. rate), the product level approver needs to request the submitter to resubmit the deal for approval after considering the recommended price.

If the **Product Level Approval Required** field is set to **Yes** and if customers or accounts in the deal have enrolled for the products, the **Product Financial Summary** section appears in the **Simulation Details** zone when you simulate the deal. It indicates the revenue, cost, profit, and profitability for each product and division combination. In addition, the **Product Financial Summary** section appears in the **Pricing and Commitments** screen. It indicates the revenue and cost of each product to which existing customer's or prospect's account is enrolled. The system calculates the revenue and cost based on the original, proposed, and recommended prices, and accordingly shows the variation between original, proposed and recommended revenue.

Recommended Pricing

Oracle Revenue Management and Billing enables the approver at any level in the product approval hierarchy, division approval hierarchy, and deal approval hierarchy to recommend a price for a price item. An approver can recommend a price for a price item only when the **Propose Pricing** field is set to **Yes** for the respective level in the approval hierarchy.

Note: The **Propose Pricing** field is non-editable for the Level 0 in the deal approval hierarchy. By default, it is set to **No**.

The recommended pricing related columns (such as **Pricing Information**, **Average Price**, and **Revenue**) are visible to the approver in the **Pricing and Commitments** section of the **Pricing and Commitments** screen. The **Recommend Price** link appears in the **Pricing Information** column corresponding to each price item. On clicking the **Recommend Price** link, the **Deal Pricing** screen appears. The **Rate** field corresponding to each price component is editable in the **Projected Pricing** section of the **Deal Pricing** screen. The approver can recommend a new price for the price item. However, note that the recommended price for the price item should be within the negotiability floor and ceil limits of the approver.

On simulating the deal, the system calculates the average price, revenue, cost, profit, and profitability based on the recommended price. It checks whether the average price of the price item is within the average price floor and ceil limits of the approver and accordingly changes the status of the price item to **Approved**, **Pending for Approval**, or **Error**. After analyzing the profitability of the deal, the approver can click the **Return to Submitter** button and thereby request the submitter to consider the recommended price for the price item. On clicking the **Return to Submitter** button, the status of the price item is changed to **Approver Recommended**. In addition, a To Do is generated for the relationship manager of the deal. If required, the approver who has recommended the price can edit or delete the recommended price before clicking on the **Return to Submitter** button.

If the approver has sent the price item to the price item manager for approval, the approver cannot recommend the price for the price item. And, if the approver has recommended the price for a price item, the approver cannot send the price item to the price item manager for approval. In such case, the

approver can send the price item to the price item manager for approval only after deleting the recommended price for the price item.

In case of parallel approval, if one approver has recommended the price for a price item, the other approver can view the recommended price for the price item. But, the other approver cannot edit or delete the recommended price for the price item. Also, in case of parallel approval, if one approver has sent the price item to the price item manager for approval, then other approver cannot recommended price for the price item. And, vice-versa, if one approver has recommended price for the price item, then other approver cannot send the price item to the price item manager for approval.

On viewing the recommended price for the price item, the relationship manager may or may not edit the price of the price item based on the approver recommendation. If the relationship manager edits the price of the price item based on the approver recommendation, the system checks whether the proposed price is within the negotiability floor and ceil limits of the relationship manager. Then, on simulating the deal, the system calculates the average price, revenue, cost, profit, and profitability based on the new proposed price. It checks whether the average price of the price item is within the average price floor and ceil limits of the relationship manager. Here, the system derives a new floor and ceil range for the relationship manager dynamically using the approver recommended price and accordingly changes the status of the price item to **Approved**, **Pending for Approval**, or **Error**.

Deal Currency Conversion

Oracle Revenue Management and Billing enables you to view the division financial summary (i.e. revenue, cost, profit, and profitability of the division) in the deal currency or in the respective division currency. A toggle switch appears above the **Division Financial Summary** section. By default, the division financial summary is shown in the deal currency. On clicking the toggle switch, you can view the division financial summary in the division's base currency.

In addition, the system enables you to:

- View the original and proposed revenue and cost of a customer (in the customer hierarchy) in the deal currency or in the respective customer's division currency
- View the original and proposed revenue and cost of an account (in the customer hierarchy) in the deal currency or in the respective account's invoice currency
- View the original and proposed revenue and cost of a price item assigned to a customer in the deal currency or in the respective customer's division currency
- View the original and proposed revenue and cost of a price item assigned to an account in the deal currency or in the respective account's invoice currency
- View the average price of a price item assigned to a customer in the pricing currency or in the respective customer's division currency
- View the average price of a price item assigned to an account in the pricing currency or in the respective account's invoice currency

A toggle switch appears above the respective section. By default, the original and proposed revenue and cost are shown in the deal currency and the average price of the price item is shown in the pricing currency. On clicking the toggle switch, you can view the original and proposed revenue and cost and average price of the price item in the customer's division currency or account's invoice currency.

During currency conversion, the system uses the currency conversion algorithm attached to the **Currency Conversion For Bill Segments** system event of the division. Note that the currency conversion happens only when the **Allow Multi-Currency Accounts** option type of the **C1_MLTCURACC** feature configuration is set to **Y**.

Reference Selection Based on Questionnaire

Oracle Revenue Management and Billing enables you to derive reference customers and deals during a deal creation using a questionnaire. Note that the reference deals are those deals which belong to the reference customers which are derived using the questionnaire. The system displays the questions from the questionnaire template which is specified in the respective deal type. Note that the system considers the questionnaire template specified in the deal type only when it is effective on the deal start date. You can also skip the questionnaire using the **Skip Questionnaire** option. If a questionnaire template is not specified in the respective deal type or if the questionnaire template is not effective on the deal start date or if the **Skip Questionnaire** option is selected during the deal creation, the system derives the reference customers for the deal using the division, customer segment, and customer tier combination. Note that reference deals are not derived when the **Skip Questionnaire** option is selected during the deal creation.

While defining a questionnaire template, you can specify the following:

- The date range when the questionnaire template is effective
- Whether to display the questions from the questionnaire template in a particular sequence or when a rule of a particular rule type is satisfied
- A set of questions that you want the customer to answer
- Whether the answer for the question should be:
 - Date
 - Decimal Value
 - From Multi Selection Drop Down List
 - From Multi Selection Check Box List
 - Numeric Value
 - Percentage
 - From Radio Button List
 - From Single Selection Drop Down List
 - Text
- Whether the answer value set for the following answer types should be derived from the reference data or from a predefined list:
 - Multi Selection Drop Down List

- Multi Selection Check Box List
- Radio Button List
- Single Selection Drop Down List
- The reference table, column, and criteria when the answer value set is set to **Reference Data**. Note that you can only use the Equal To and IN operators while defining the reference criteria.
- The default answer for the question
- Whether the question is mandatory or optional in the questionnaire
- The parameter which helps to derive the reference customers when the question is answered in the questionnaire. Note that you can only specify a parameter where the source entity is set to **Person** or **Account** and the source type is set to **Characteristic** or **Field**.
- The rule type which helps to determine the rules that should be executed to display the next question in the questionnaire
- Whether the response from the question should be used to derive the reference customer list
- The predefined values when the answer value set is set to **Predefined List**

A new screen named **Questionnaire Template** is introduced in this release. You can define, edit, delete, copy, and preview a questionnaire template through this screen. On previewing a sequence based or rule based questionnaire template, the questions appear in the specified sequence. When a rule based questionnaire template is used during a deal creation, the system displays the next question based on the output of the previous question.

A new page named **Questionnaire** is added to the **Deal Information** screen which helps to answer the questionnaire. The number of questions that appear in the **Questionnaire** page depends on the value specified in the **Questionnaire UI Pagination Limit** option type of the **C1-DEAL** feature configuration.

Deal Dashboard

The following changes are made to the Deal Dashboard screen:

- Earlier, you were able to view the following metrics through a tiles chart in the **Deal Action/Metrics** zone:
 - Number of deals created by the user
 - Number of deals in the **Pending for Approval** status
 - Number of deals yet to be finalized
 - Number of deals yet to be accepted by the customer
 - Number of deals accepted by the customer
 - Number of deals rejected by the customer

Now, in addition, you can view the above metrics through a bar and line chart in the **Deal Metrics** zone. The bar chart indicates the number of deals in different statuses for an existing customer, existing account, and prospect. And, the line chart indicates the deal revenue from an existing customer, existing account, and prospect. By default, the above data is shown for the period which is specified in the **Deal Limits in months** option type of the **C1-DEAL** feature configuration.

You can change the period, if required. In addition, you can filter the above metrics based on division, customer segment, and customer tier.

- A new zone named **Deal Statistics** is added to this screen. It contains a pie chart. It works in conjunction with the tiles chart shown in the **Deal Metrics** zone. On clicking a tile in the tiles chart, the pie chart graphically represents the number of deals of an existing customer, existing account, and prospect in the respective status.
- Earlier, you were able to view all To Dos assigned to the user in the **Deal To Do** zone. Now, this zone is redesigned to enhance the user experience. Two columns are added in the **Deal To Do** zone:
 - **To Do** – On clicking the icon in the **To Do** column, the **To Do Entry** screen appears where you can view the information of the respective To Do.
 - **Deal Information** – Indicates the deal for which the To Do is created. It has a link. On clicking the link, the **Deal Information** screen appears where you can perform the required action.

In addition, the following filters are added to the **Deal To Do** zone – To Do Type, Priority, Start Date, and End Date. By default, the system lists the To Dos that are created in the period which is specified in the **Deal Limits in months** option type of the **C1-DEAL** feature configuration. You can change the period, if required. The system lists the To Dos in the descending order of the creation date.

- Now, the system enables you to compare two deals or two deal versions through this screen. However, while comparing two deals, you can only select a deal which has only one deal version. The **Add to Compare** link is available in the **Search Deal** and **Deal Versions** zones. To compare two deals, you need to select the check box corresponding to the two deals which you want to compare and then click the **Add to Compare** link. The **Deal Comparison** zone appears in the **Deal Dashboard** screen.

Similarly, to compare two deal versions, you need to select the check box corresponding to the two deal versions which you want to compare and then click the **Add to Compare** link. The **Deal Comparison** zone appears in the **Deal Dashboard** screen. Note that you can compare two deals or deal versions only when they are in the **Simulated** status and their deal currency is same.

On clicking the **Compare** link in the **Deal Comparison** zone, the **Deal Compare** screen appears. It enables you to view the comparison results in the following ways:

- **Summary** – In the summary report, the system displays the overall cost, proposed revenue, and profitability of two deals or deal versions. It also displays the proposed revenue for each division.
- **Detailed** – In the Detailed report, the system displays the following:
 - Overall cost, proposed revenue, and profitability of two deals or deal versions
 - Proposed revenue for each division
 - If the deal comparison is based on revenue, the system displays the proposed revenue for each price item, root level hierarchy entity, and non-root level hierarchy entity.

- If the deal comparison is based on average price, the system displays the average price for each price item.

The system enables you to filter the detailed report based on a price item, root level hierarchy entity, or non-root level hierarchy entity.

The system enables you to extract the summary and detailed report in the Excel format. The system provides the following two options which you can use while comparing two deals or deal versions - **Highlight Differences** and **Show Only Differences**.

- The **Deal Approval Workflow** screen is enhanced to show the product approval hierarchy details of the deal. The approval workflow tracker shows the product approval hierarchy when the customers or accounts in the deal have enrolled for the products and the **Product Level Approval Required** field is set to **Yes** in the respective deal type. In addition, the product approval history is shown in the respective section.

Rate Negotiability for Price Item in Deal

Oracle Revenue Management and Billing enables you to indicate whether the rate is negotiable for a price item in a deal. A new field named **Negotiability Switch** is introduced while defining or editing a price item. The system enables you to set the negotiability option for a price item at the division level. Therefore, you can set different the negotiability option for the divisions to which the price item is associated. By default, the **Negotiability Switch** field is set to **No**.

If you set the **Negotiability Switch** field to **No** for a division of a price item, you cannot edit or override the rate of the price item in a deal when the customer or account to which the price item is assigned belongs to the division. However, if you set the **Negotiability Switch** field to **Yes** for a division of a price item, you can edit or override the rate of the price item in a deal when the customer or account to which the price item is assigned belongs to the division. Along with the **Negotiability Switch** field, you can also set the **Only Within Range** field which indicates that the system should validate whether the negotiated rate is within the negotiability floor and ceil limits. The **Only Within Range** field is enabled only when the **Negotiability Switch** field is set to **Yes**. By default, the **Only Within Range** field is set to **No**.

If the **Only Within Range** field is set to **No**, the system does not validate whether the negotiated rate is within the negotiability floor and ceil limits. However, if the **Only Within Range** field is set to **Yes**, the system validates whether the negotiated rate is within the negotiability floor and ceil limits. You can define the negotiability floor and ceil limits for a division of a price item at the price item level or at the price assignment level.

On clicking the link in the **Pricing Information** column corresponding to a price item in the **Pricing and Commitments** screen, the system enables you to edit or override the original pricing when the **Negotiability Switch** field is set to **Yes** for the price item and thereby create a proposed pricing. If the **Only Within Range** field is set to **Yes**, the system first validates whether the negotiated rate is within the negotiability floor and ceil limits specified in the original pricing (in case of override) or proposed pricing (in case of edit). To validate the rate, the system considers the pricing where the price item, pricing currency, and division (for which pricing is defined on the customer or account) is same. If the negotiated rate is within the negotiability floor and ceil limits specified in the original or proposed pricing, the system

enables you to edit or override the rate. However, if the negotiated rate is not within the negotiability floor and ceil limits specified in the original or proposed pricing, an error occurs indicating that the specified rate is not within the negotiability floor and ceil limits.

If the negotiability floor and ceil limits are not specified for the division in the original or proposed pricing, the system checks whether the negotiated rate is within the negotiability floor and ceil limits specified at the price item level. The system considers the negotiability range of the pricing currency. If the negotiated rate is within the negotiability floor and ceil limits specified at the price item level, the system enables you to edit or override the rate. However, if the negotiated rate is not within the negotiability floor and ceil limits specified at the price item level, an error occurs indicating that the specified rate is not within the negotiability floor and ceil limits. If the negotiability range is not defined for the pricing currency, the system does not validate whether the negotiated rate is within the negotiability floor and ceil limits of the price item.

If the rate negotiability feature is configured for a price item, the system enables:

- The relationship manager to propose a negotiated rate for the price item
- The product level approver, division level approver, and deal level approver to recommend a rate for the price item.

Deal Profitability Report

Oracle Revenue Management and Billing enables you to view the profitability report of a deal which is in the **Simulated** status. If a deal has one deal version, you can click the icon in the **Profitability Details** column corresponding to the deal in the **Deal Dashboard** screen. However, if a deal has two or more deal versions, you can click the icon in the **Profitability Details** column corresponding to the deal version in the **Deal Dashboard** screen. This is because the profitability details are shown for a particular deal version and not for all versions of a deal.

A new screen named **Deal Profitability** is introduced in this release. It appears when you click the icon in the **Profitability Details** column. This screen enables you to view the following:

- **Deal Level Profitability Report** – Displays the profitability details (such as, proposed revenue, proposed cost, profit, original revenue, and revenue deviation) of each person in the customer hierarchy.
- **Division Level Profitability Report** – Displays the profitability details (such as, proposed revenue, proposed cost, profit, original revenue, and revenue deviation) of each division. If required, you can filter the profitability details of a particular division.
- **Price Item Level Profitability Report** – Displays the profitability details (such as, proposed commitment, proposed revenue, proposed cost, profit, original revenue, original commitment, and revenue deviation) of each price item. Here, you can also view the profitability details at the hierarchy entity level.
- **All Reports** (by default at once)

Average Price Validation Using Floor and Ceil Limits

Until now, the system ensured that the relationship manager, division level or deal level approver, and price item manager could approve the average price of a price item in a deal only when it is within the absolute floor and ceil limits of the respective To Do role. Now, in addition, the system provides the following features:

- Validate Average Price Using Spread Amount or Spread Percentage
- Validate Average Price Against Eligible Price List Pricing

On simulating the deal, the system checks whether the **Price Item Approval Required** field is set to **Yes** in the respective deal type. If the **Price Item Approval Required** field is set to **Yes**, the system derives the eligible price lists for the customer using the division, customer segment, and customer tier attributes. If one or more eligible price lists exist for the customer, the system checks whether a price assignment for the price item exists in any of the eligible price list. If the price assignment exists for the price item in an eligible price list, the system checks whether the **Average Price Floor and Ceil Limits** field in the price assignment is set to **Absolute Value Range**, **Spread Amount**, or **Spread Percentage**. The system does the following depending on the value specified in the **Average Price Floor and Ceil Limits** field:

- **Absolute Value Range** – If the **Average Price Floor and Ceil Limits** field in the price assignment is set to **Absolute Value Range**, the system checks whether the average price of the price item in the deal is within the floor and ceil limits of the relationship manager's To Do role. If the pricing currency is different from the floor and ceil currency, the system does the currency conversion. If the average price of the price item in the deal is within the absolute floor and ceil limits, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the absolute floor and ceil limits, the status of the price item remains as **Pending for Approval**.
- **Spread Amount** - If the **Average Price Floor and Ceil Limits** field in the price assignment is set to **Spread Amount**, the system calculates the average price of the price assignment. If a flat pricing is defined in the price assignment, the system sets the average price to the flat rate. However, if a tiered pricing is defined in the price assignment, the system calculates the average price using the following formula:

$$\text{Average Price} = \text{Price Item Revenue} / \text{Price Item Commitments}$$

The system then considers the spread amount specified for the relationship manager's To Do role in the price assignment. Using the spread amount and average price, the system calculates the average price floor and ceil values. The system then checks whether the average price of the price item in the deal is within the derived average price floor and ceil limits. If so, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the derived average price floor and ceil limits, the status of the price item remains as **Pending for Approval**.

- **Spread Percentage** - If the **Average Price Floor and Ceil Limits** field in the price assignment is set to **Spread Percentage**, the system calculates the average price of the price assignment. If a flat pricing is defined in the price assignment, the system sets the average price to the flat rate. However, if a tiered pricing is defined in the price assignment, the system calculates the average price using the following formula:

Average Price = Price Item Revenue/Price Item Commitments

The system then considers the spread parentage specified for the relationship manager's To Do role in the price assignment. Using the spread percentage and average price, the system calculates the average price floor and ceil values. The system then checks whether the average price of the price item in the deal is within the derived average price floor and ceil limits. If so, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the derived average price floor and ceil limits, the status of the price item remains as **Pending for Approval**.

If the absolute floor and ceil limits, spread amount, or spread percentage is not defined for the To Do role in the price assignment, the system checks whether the **Average Price Floor and Ceil Limits** field in the price item is set to **Absolute Value Range**, **Spread Amount**, or **Spread Percentage**. The system does the following depending on the value specified in the **Average Price Floor and Ceil Limits** field:

- **Absolute Value Range** – If the **Average Price Floor and Ceil Limits** field in the price item is set to **Absolute Value Range**, the system checks whether the average price of the price item in the deal is within the floor and ceil limits of the relationship manager's To Do role. If the pricing currency is different from the floor and ceil currency, the system does the currency conversion. If the average price of the price item in the deal is within the absolute floor and ceil limits, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the absolute floor and ceil limits, the status of the price item remains as **Pending for Approval**.
- **Spread Amount** - If the **Average Price Floor and Ceil Limits** field in the price item is set to **Spread Amount**, the system calculates the average price of the price assignment. If a flat pricing is defined in the price assignment, the system sets the average price to the flat rate. However, if a tiered pricing is defined in the price assignment, the system calculates the average price using the following formula:

Average Price = Price Item Revenue/Price Item Commitments

The system then considers the spread amount specified for the relationship manager's To Do role in the price item. Using the spread amount and average price, the system calculates the average price floor and ceil values. The system then checks whether the average price of the price item in the deal is within the derived average price floor and ceil limits. If so, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the derived average price floor and ceil limits, the status of the price item remains as **Pending for Approval**.

- **Spread Percentage** - If the **Average Price Floor and Ceil Limits** field in the price item is set to **Spread Percentage**, the system calculates the average price of the price assignment. If a flat pricing is defined in the price assignment, the system sets the average price to the flat rate. However, if a tiered pricing is defined in the price assignment, the system calculates the average price using the following formula:

Average Price = Price Item Revenue/Price Item Commitments

The system then considers the spread parentage specified for the relationship manager's To Do role in the price item. Using the spread percentage and average price, the system calculates the

average price floor and ceil values. The system then checks whether the average price of the price item in the deal is within the derived average price floor and ceil limits. If so, the system changes the status of the price item to **Approved**. However, if the average price of the price item in the deal is not within the derived average price floor and ceil limits, the status of the price item remains as **Pending for Approval**.

However, if the absolute floor and ceil limits, spread amount, or spread percentage is not defined for the To Do role in the price item, the system changes the status of the price item to **Error**. If the system could not derive a price assignment for the price item from any of the eligible price list, the system checks whether the **Average Price Floor and Ceil Limits** field in the price item is set to **Absolute Value Range**, **Spread Amount**, or **Spread Percentage**. If the **Average Price Floor and Ceil Limits** field in the price item is set to **Absolute Value Range**, the system validates the average price of the price item in the deal using the absolute floor and ceil values of the respective To Do role. But, if the **Average Price Floor and Ceil Limits** field in the price item is set to **Spread Amount** or **Spread Percentage**, the system changes the status of the price item to **Error**.

Similarly, the system validates the average price of a price item when the product level approver, division level approver, deal level approver, or price item manager approves the price item in a deal.

Price List Simulation

Oracle Revenue Management and Billing provides you a price list simulator wherein you can simulate the pricing and analyze the revenue impact. A new screen named **Price List Simulation** is introduced in this release. It enables you to search for a price list whose price item pricing you want to simulate. You can search for:

- Price lists assigned to customers or accounts where a particular characteristic is defined
- Price lists where a particular price item is assigned
- Price list which is associated with a particular product
- Price lists with a particular description

Once you search for a price list, you can simulate the pricing in a particular currency. On clicking the icon in the **Price List Simulation – Proposal** column, the **Price List Simulation – Proposal** screen appears where you can individually update the price and/or volume of a price item or mass update the price and/or volume of the price items in the price list. On simulating the price list, the **Price List Simulation Results** screen appears where you view the details of the simulation. The details include:

- List of accounts which would be affected with the change in price
- Original and proposed revenue and the revenue impact due to change in the price

On clicking the **Simulate** button, the system creates the simulation in the **Pending** status. On clicking the **Request Approval** button corresponding to a simulation, the system changes the status of the simulation to **Approved**. The system enables you to extract the effective pricing and simulation results in the Excel format.

Considering Pass Through Charges in Original Revenue

Earlier, the system did not consider the pass through charges of an account while calculating the original revenue of the account and customer in a deal. Now, the system considers the recurring and non-recurring pass through charges of an account while calculating the original revenue of the account and customer in a deal. The system does the following while deriving the recurring and non-recurring pass through charges of an account:

1. Derives the usage period (i.e. usage start date and usage end date) using the price selection date specified in the deal
2. Considers those billable charges with the pass through amount where the usage start or end date falls within the billable charge start and end dates
3. Calculates the pass through charges for the usage period in the deal frequency
4. Converts the pass through charges in the account's invoice currency and deal currency when the pass through charges are in the different currency

You can view the pass through charges of a price item which are billed to the account in the **Pass Through Charge Information** section of the **Pricing and Commitments** screen. The system enables you to derive the pass through charges of an account in either of the following mode:

- **Online Mode** - If you set the **Refer Volume Aggregation** option type of the **C1-DEAL** feature configuration to **N**, the system derives the recurring and non-recurring pass through charges of an account in the online mode. The online mode means that the pass through charges of an account are derived for the usage period in the deal frequency at the runtime when you view the pricing and commitment details of the account.
- **Deferred Mode** - If you set the **Refer Volume Aggregation** option type of the **C1-DEAL** feature configuration to **Y**, the system derives the recurring and non-recurring pass through charges of an account in the deferred mode (i.e. in the background). The deferred mode means when you execute the following batches:
 - **Aggregate Account's Volume and Count (PREAGGR)** - The **Aggregate Account's Volume and Count (PREAGGR)** batch derives the recurring and non-recurring pass through charges of an account for all deal frequencies (i.e. Monthly, Quarterly, Half Annually, and Annually) and stores the information in the **C1_CHARGE_AGGR** table. If you want to derive the pass through charges of an account in the deferred mode, you need to execute the **Aggregate Account's Volume and Count (PREAGGR)** batch before creating a deal for an existing account.
 - **Aggregate Customer's Volume and Count (CSTPREAG)** - The **Aggregate Customer's Volume and Count (CSTPREAG)** batch aggregates the pass through charges of all accounts of a customer for all deal frequencies (i.e. Monthly, Quarterly, Half Annually, and Annually) and stores the information in the **C1_CHARGE_AGGR** table. If you want to aggregate the pass through charges of all accounts of a customer in the deferred mode, you need to execute the **Aggregate Customer's Volume and Count (CSTPREAG)** batch after executing the **Aggregate Account's Volume and Count (PREAGGR)** batch.

The system then extracts the pass through charges of an account from the **C1_CHARGE_AGGR** table while creating a deal. We recommend you to use this mode to experience a better system performance.

Considering SQI Based Billable Charges for Calculating Commitments

Earlier, the system did not consider the SQI based billable charges of an account while calculating the original and proposed commitments of the account and customer in a deal. Now, the system considers the recurring and non-recurring SQI based billable charges of an account while calculating the original and proposed commitments of the account and customer in a deal. The system does the following while deriving the service quantities from the recurring and non-recurring billable charges of an account:

1. Derives the usage period (i.e. usage start date and usage end date) using the price selection date specified in the deal
2. Considers those SQI based billable charges where the usage start or end date falls within the billable charge start and end dates
3. Calculates the service quantities for the usage period in the deal frequency

The system enables you to derive the service quantities from the recurring and non-recurring billable charges of an account in either of the following mode:

- **Online Mode** - If you set the **Refer Volume Aggregation** option type of the **C1-DEAL** feature configuration to **N**, the system derives the service quantities from the recurring and non-recurring billable charges of an account in the online mode. The online mode means that the service quantities from the recurring and non-recurring billable charges of an account are derived for the usage period in the deal frequency at the runtime when you view the pricing and commitment details of the account.
- **Deferred Mode** - If you set the **Refer Volume Aggregation** option type of the **C1-DEAL** feature configuration to **Y**, the system derives the service quantities from the recurring and non-recurring billable charges of an account in the deferred mode (i.e. in the background). The deferred mode means when you execute the following batches:
 - **Aggregate Account's Volume and Count (PREAGGR)** - The **Aggregate Account's Volume and Count (PREAGGR)** batch derives the service quantities from the recurring and non-recurring billable charges of an account for all deal frequencies (i.e. Monthly, Quarterly, Half Annually, and Annually) and stores the information in the **C1_VOLUME_AGGR** table. If you want to derive the service quantities from the recurring and non-recurring billable charges of an account in the deferred mode, you need to execute the **Aggregate Account's Volume and Count (PREAGGR)** batch before creating a deal for an existing account.
 - **Aggregate Customer's Volume and Count (CSTPREAG)** - The **Aggregate Customer's Volume and Count (CSTPREAG)** batch aggregates the billed service quantities of all accounts of a customer for all deal frequencies (i.e. Monthly, Quarterly, Half Annually, and Annually) and stores the information in the **C1_VOLUME_AGGR** table. If you want to

aggregate the billed service quantities of all accounts of a customer in the deferred mode, you need to execute the **Aggregate Customer's Volume and Count (CSTPREAG)** batch after executing the **Aggregate Account's Volume and Count (PREAGGR)** batch.

The system then extracts the billed service quantities of an account from the **C1_VOLUME_AGGR** table while creating a deal. We recommend you to use this mode to experience a better system performance.

Considering Billable Charges Generated Through TFM in Deal

Earlier, the system did not consider the SQI based billable charges generated through TFM for calculating the original and proposed commitments of the account and customer in a deal. Now, the system considers the SQI based billable charges generated through TFM for calculating the original and proposed commitments of the account and customer in a deal. In addition, the system considers the pass through charges of an account generated through TFM while calculating the original revenue of the account and customer in a deal.

Stacking Commitments in Deal

Oracle Revenue Management and Billing enables you to stack commitments of a customer in a deal when a price assignment of its account is defined at the parent customer, grandparent customer, or at the sibling customer level in the customer hierarchy. Stacking means aggregating the service quantities of the customer, parent customers, grandparent customers, and sibling customers in the customer hierarchy. The system then derives the tiered pricing based on the stacked commitments of the customer instead of using the actual commitments of the account. To enable the stacking feature for a deal, you need to do the following:

- Ensure that the **Stacking Required (Y/N)** parameter is set to **Y** in the rate value algorithm of the required rate components
- Attach the **C1_STACKDEAL** algorithm to the **Hierarchy Creation Completion** system event in the respective deal type

New Features (Specific to Insurance)

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

- [Membership Repricing through Inbound Web Service](#)
- [Field Mapping](#)
- [Geographic Rating Area Pricing Parameter](#)
- [Member Relationship Pricing Parameter](#)
- [Subscription Tier Pricing Parameter](#)
- [COBRA Membership](#)
- [Administration Fee Pricing for COBRA Membership](#)
- [Medicare Membership](#)
- [Medicare Part D LIS and LEP Pricing](#)
- [Bill Cycle and Bill Period Derivation](#)
- [Premium Proration Rules](#)
- [Bill Period Timeline](#)
- [9/10 Billing \(Skip Months\)](#)
- [Self-Funded Pricing Rule Versioning](#)
- [Age Monitoring](#)

Membership Repricing through Inbound Web Service

Oracle Revenue Management and Billing enables you to do the following through the **C1-MembershipRepricing** business service:

- Define and edit the following types of membership:
 - Active Employee Coverage Membership
 - Employer Sponsored Group Medicare Membership (800 Series Plans)
 - COBRA Membership
- Add a member person to the membership
- Edit the existing member person details of the membership
- Create a person whom you want to add to the membership
- Edit the details of a person who is added to the membership
- Define and edit a benefit of a member person in a medicare membership

Note: While editing a benefit of a member person, the system inactivates the old record and creates a new record in the system. The status of the old benefit record is set to **Inactive** and the status of the new benefit record is set to **Active**.

- Recalculate the membership premium (i.e. trigger repricing) in the following scenarios:

- A membership is added or edited in the fully-insured policy plan.
- A member person is added to the membership.
- The fields, characteristics, or statuses which are monitored for the auditing purposes are updated at the membership or member person level.
- Recalculate the membership premium in the simulation mode and not in real time

Note: You can use the simulation mode as the What-If Analysis tool. In the simulation mode, you can evaluate the membership premium when a new membership will be added or the existing membership will be updated. However, in the simulation mode, the system neither adds or edits the membership in the system nor creates the billable charge for the membership premium. It only recalculates the membership premium and sends the premium calculation details in the response. Note that membership premium recalculation happens only in the above three listed scenarios.

- View the information of the memberships whose start and end dates fall within the specified date range. The information includes:
 - Details of the membership
 - Details of each member person in the membership
 - Benefit details of a member person in a medicare membership
 - Details of the billable charges created for the membership premium for different price items
 - Pricing rule and price assignment used during the membership premium billable charge creation
 - Account for which the membership premium billable charge is created
 - How premium is calculated for each timeline of the billable charge

Note:

If the age based pricing is used during the membership premium calculation, the premium is calculated for each eligible member of the membership. Here, the premium amount is the sum of the base fee and modifier fee (if any) for the eligible member.

However, if the tier based pricing is used during the membership premium calculation, the premium is calculated at the membership level. Here, the premium amount is the base fee applicable for the membership.

You can also filter the list of membership premium billable charges by specifying price items whose billable charges you want to view.

- View the last billed amount and current balance of the account on which the membership premium is billed.

You can define or edit only one membership at a time through the **C1-MembershipRepricing** business service. You can only create or edit a member person and not a bill group or parent customer through the **C1-MembershipRepricing** business service.

We have shipped a SOAP based inbound web service named **C1-MembRepricing** with the product. You can send the membership repricing request from the external system in the XML format through the **C1-MembRepricing** inbound web service. If you want to send the request in the XML and/or JSON format, you need to create a REST based inbound web service.

Field Mapping

A new screen named **Field Mapping** is introduced in this release. It enables you to define a preference of the following categories:

- Billing Preferences
- Geographic Rating Area Preferences
- Medicare Plan Benefit Preferences
- Member Reconciliation Preferences
- Member Relationship and Subscription Tier Preferences
- Statement Construct Preferences

You can define various settings in each preference depending on the preference category. You can use these preferences to configure various features in Oracle Revenue Management and Billing.

Geographic Rating Area Pricing Parameter

Oracle Revenue Management and Billing enables you to use the geographic rating area as a pricing parameter while defining the age based, tier based, and additional charge pricing rules. This feature facilitates you to offer different rates for a price item based on different geographic rating area.

The system enables you to add and edit a geographic rating area from the user interface. You can also add or edit a set of geographic rating areas at once using the **File Upload Interface** utility. However, note that while editing a geographic rating area, you can only change the end date to a far future date and the status from **Active** to **Inactive**.

While maintaining a geographic rating area in the system, you can also list the policy plans available in the geographic rating area. You can add the policy plan information for a geographic rating area from the user interface or through the **File Upload Interface** utility. But, you cannot edit the policy plan information of a geographic rating area through the **File Upload Interface** utility.

You can upload the geographic rating areas from the CSV file using the **C1GEORATINGARCSVUPLD** file request type through the **File Transformation and Upload (C1-FTRAN)** batch.

Note: You need to set the **Include Plan Or Product Details** parameter in the **C1-GEORAVALD** algorithm to **Y** or **N**. If the value for this parameter is set to **Y**, the system identifies the record using the State, Zip From, Zip Plus4 From, Zip To, Zip Plus4 To, Start Date, Policy Number, Plan Number, and Source System combination. However, if the value for this parameter is set to **N**, the system identifies the record using the State, Zip From, Zip Plus4 From, Zip To, Zip Plus4 To, and Start Date combination.

Once you define a geographic rating area, the system can derive the geographic rating area for a membership using the **Address Source** and **Address Type** characteristic types. The system supports two address sources named **Policy Holder** and **Main Subscriber** and three address types named **Person Mailing**, **Person Seasonal**, and **Account Override**.

On adding a membership to a policy plan, the system first derives the characteristic types from the **Address Source Characteristic Type** and **Address Type Characteristic Type** attributes of a geographic rating area preference. The system considers the geographic rating area preference which is specified in the **Geographic Rating Area Field Mapping** option type of the **C1-ASOBLNG** feature configuration. Then, the system searches for these characteristics on the following entities in the specified sequence:

1. Policy Plan
2. State where the Policy Plan is Issued
3. Policy
4. State where the Policy is Issued

If these characteristics are not defined for any of the above listed entities, the system derives the default address source and address type from the geographic rating area preference.

Note: By default, the **Address Source (C1-ADSRC)** and **Address Type (C1-ADTYP)** characteristic types are shipped with the product. You need to set these characteristic types in the respective attribute of the geographic rating area preference.

If the address source is set to **Policy Holder**, the system fetches the value from the **Parent Customer Policy Person Role** option type of the **C1-ASOBLNG** feature configuration. The system then derives the person who is associated with the policy using the parent customer policy person role. Once the address source and address type are derived, the system fetches the state and zip code from the address type of the address source. For example, if the address source is set to **Policy Holder** and address type is set to **Person Mailing**, the system fetches the state and zip code from the policy holder's mailing address. Once the state and zip code are fetched from the address, the system checks whether the zip code is a 9-digit code. If not, the system appends zeros to make it a 9-digit zip code. The system then derives the value of the **Use Plan Details** attribute from the geographic rating area preference. If the attribute is set to **Yes**, the system then derives a geographic rating area for the state, zip code, policy number, plan number, and source system combination. However, if the attribute is set to **No**, the system then derives a geographic rating area for the state and zip code combination. If the system could not derive the geographic rating area, the system derives the default geographic rating area from the geographic rating area preference. Once the geographic rating area is derived, the system stores the geographic rating area for the membership. The characteristic type specified in the **Geographic Rating Area Characteristic Type** attribute of the geographic rating area preference is used to store geographic rating area for the membership. The effective date of the characteristic is set to effective date of the address.

The geographic rating area of the membership must be changed when the address of the policy holder or main subscriber is updated. Therefore, when an address of a person is change, the system identifies the following:

- Memberships of policies where the person is the policy holder
- Memberships where the person is the main customer

For each membership, the system searches for the **Address Source** and **Address Type** characteristics on the following entities in the specified sequence:

1. Policy Plan
2. State where the Policy Plan is Issued
3. Policy
4. State where the Policy is Issued

If these characteristics are not defined for any of the above listed entities, the system derives the default address source and address type from the geographic rating area preference. If the address source is set to **Policy Holder**, the system fetches the value from the **Parent Customer Policy Person Role** option type of the **C1-ASOBLLNG** feature configuration. The system then derives the person who is associated with the policy using the parent customer policy person role.

Once the address source and address type are derived, the system fetches the state and zip code from the address type of the address source. The system then derives a geographic rating area for the state, zip code, policy number, plan number, and source system combination or for the state and zip code combination depending on the value defined for the **Use Plan Details** attribute. If the system could not derive the geographic rating area, the system derives the default geographic rating area from the geographic rating area preference. If the geographic rating area is different, the system creates a new characteristic to store the geographic rating area for the membership. The effective date of the characteristic is set to effective date of the address.

To use the geographic rating area as a pricing parameter, you need to define the Geographic Rating Area parameter where:

- **Value Type** is to **Adhoc**
- **Source Entity** is set to **Membership**
- **Source Type** is set to **Characteristic**
- **Source Type Code** is set to a characteristic type which is specified in the **Geographic Rating Area Characteristic Type** attribute of the geographic rating area preference
- **Parameter Usage** is set to **Price Item** and **Pricing Eligibility Criteria**

Once the Geographic Rating Area parameter is defined, you need to associate the parameter with the price items for which you want to define different rates in a pricing rule using the parameter. This helps to define different base fee for a price item based on geographic rating area to which the membership belongs.

A new screen named **Geographic Rating Area** is introduced in this release. It enables you to add, edit, and inactivate a geographic rating area.

Member Relationship Pricing Parameter

Oracle Revenue Management and Billing enables you to use the member relationship (i.e. how a member is related to the main subscriber of the membership) as a pricing parameter while defining the age based, tier based, and additional charge pricing rules. This feature facilitates you to offer different rates for a price item based on different member relationship.

While adding a membership to a policy plan or while adding or inactivating a member person in a membership, the system automatically derives member relationship for each member person of the membership from a member relationship structure. You can define a member relationship structure through a characteristic on the policy plan. While defining a member relationship structure for a policy plan, you must use the characteristic type specified in the **Member Relationship Structure Characteristic Type** attribute of a member relationship and subscription tier preference. The system considers the member relationship and subscription tier preference which is specified in the **Relation Structure Code Field Mapping** option type of the **C1-ASOBLNG** feature configuration.

The system enables you to define two types of member relationship structure:

- **Step Member Relationship Structure** - A step member relationship structure helps the system to determine how each member person is related to the main subscriber of the membership. You can specify a list of member relationships in a step member relationship structure. A member relationship is derived for a member person depending on the following:
 - Whether the member person is a self, spouse, or dependent
 - Number of spouses, dependents, and young adults in the membership

A relationship matrix indicates whether a member person with a particular relationship type should be considered as self, spouse, or dependent while deriving the member relationship. In a step member relationship structure, a spouse is never considered as a dependent. Only children are considered as dependents.

For example, you can create a step member relationship structure named STEPEX1 as shown below:

Member Relationship	Self	Number of Spouses	Number of Dependents	Number of Young Adults
Self	1	0	0	0
Spouse 1	1	1	0	0
Spouse 2	1	2	0	0
Child 1	1	1	1	0
Young Adult 1	1	1	0	1
CD1 and YA1	1	1	1	1
Child 2	1	1	2	0
Young Adult 2	1	1	0	2

Member Relationship	Self	Number of Spouses	Number of Dependents	Number of Young Adults
CD2 and YA2	1	1	2	2
Additional Dependent	1	3	3	3

Note: You can only define one member relationship in a step member relationship structure where the sum of self, number of spouses, number of dependents, and number of young adults exceeds the maximum member count specified in the step member relationship structure.

In addition, you can create a relationship matrix in the STEPEX1 member relationship structure as shown below:

Relation	Relationship Type	Relationship
Main Subscriber	Owner	Self
Main Subscriber	Member	Self
Children	Child	Dependent
Spouse	Wife	Spouse
Spouse	Spouse	Spouse

- Party Member Relationship Structure** - A party member relationship structure helps the system to determine how each member person is related to the main subscriber of the membership. You can specify a list of member relationships in a party member relationship structure. A member relationship is derived for a member person depending on the following:
 - Whether the member person is a self or dependent
 - Number of dependents in the membership

A relationship matrix indicates whether a member person with a particular relationship type should be considered as self or dependent while deriving the member relationship. In a party member relationship structure, a spouse is always considered as a dependent. Also, children are not categorized as young adults.

For example, you can create a party member relationship structure named PARTYEX1 as shown below:

Member Relationship	Self	Number of Spouses	Number of Dependents	Number of Young Adults
Self	1	0	0	0
Dependent 1	1	0	1	0
Dependent 2	1	0	2	0
Dependent 3	1	0	3	0
Additional Dependents	1	0	9	0

Note: You can only define one member relationship in a party member relationship structure where the sum of self and number of dependents exceeds the maximum member count specified in the party member relationship structure.

In addition, you can create a relationship matrix in the PARTYEX1 member relationship structure as shown below:

Relation	Relationship Type	Relationship
Main Subscriber	Owner	Self
Main Subscriber	Member	Self
Children	Child	Dependent
Spouse	Wife	Dependent
Spouse	Spouse	Dependent

Once the member relationship structure is derived from the policy plan, the system determines the member relationship for each member person in the membership. While determining the member relationship for a member person, the system derives the following characteristic types from the respective attributes of the member relationship and subscription tier preference:

- Age Calculation Date Basis
- Max Age Limit for Max Dependent Count
- Max Number of Dependents Order Priority
- Maximum Number of Dependents
- Member Relationship Derivation Date
- New Born Gift Days
- New Born Gift Days Applicability
- Young Adult Max Age Limit
- Young Adult Max Age Limit Applicability

The system then derives these characteristics from the policy plan. If the **Member Relationship Derivation Date** characteristic type is set to **Enrollment Date**, the system derives the member relationship for each member person of the membership in order of the member start date. However, if the **Member Relationship Derivation Date** characteristic type is set to **Date of Birth**, the system derives the member relationship for each member person of the membership in order of the date of birth. For example, if a membership with the following member persons is added to a policy plan:

Member Start Date	Member End Date	Person Name	Main Subscriber	Relationship Type	Member	Date of Birth
1-Jan-18	31-Dec-20	Mark	Yes	Self	Yes	15-Jan-68
1-Jan-18	31-Dec-20	Nancy	No	Wife	Yes	20-Apr-72
1-Jan-18	31-Dec-20	Roger	No	Child	Yes	15-May-01

Member Start Date	Member End Date	Person Name	Main Subscriber	Relationship Type	Member	Date of Birth
1-Jan-18	31-Dec-20	Tom	No	Child	Yes	16-May-04

Now, if the following characteristics are defined on the policy plan:

- Member Relationship Structure - STEPEX1
- Member Relationship Derivation Date – Date of Birth
- Age Calculation Date Basis – Enrollment Date
- Maximum Number of Dependents – 3
- Max Number of Dependents Order Priority - YOUNGEST

The system will consider the STEPEX1 member relationship structure and derives the member relationship for each member person as shown below:

Member Person	Effective Date	Characteristic Type	Characteristic Value
Mark	1-Jan-18	Member Relationship	Self
Nancy	1-Jan-18	Member Relationship	Spouse 1
Tom	1-Jan-18	Member Relationship	Child 1
Roger	1-Jan-18	Member Relationship	Child 2

Note that the member relationship of Tom is derived before Roger because he is youngest of all dependents. Now, assume if one more member person named Harry with the date of birth as 05-11-08 and relationship type as Child is added to the membership on 05-Jan-18, then the system derives the member relationship for each member person of the membership as shown below:

Effective Date	Member	Member Person Characteristics	Value
1-Jan-18	Mark	Member Relationship	Self
1-Jan-18	Nancy	Member Relationship	Spouse 1
5-Jan-18	Harry	Member Relationship	Child 1
5-Jan-18	Tom	Member Relationship	Child 2
5-Jan-18	Roger	Member Relationship	Additional Dependent

The member relationship for Harry, Tom, and Roger is derived in the order of their age which is calculated from the enrollment date. Because the member relationship derived for Tom and Roger is different, the system creates a new characteristic to store the member relationship for Tom and Roger. Here, the effective date of the characteristics is set to the new member person's start date.

If a new born is added to the membership, the effective date of the new born's member relationship characteristic is calculated considering the gift days if applicable. If a member person is end dated, the system derives the member relationship of all other member persons once again. If the member relationship for a member person is different, the system creates a new characteristic to store the member relationship for the member person. The effective date of the new characteristic is set to member person's end date + 1. However, if a member person is inactivated, the system derives the member relationship of all other member persons once again. If the member relationship for a member person is different, the system updates the existing member relationship characteristic of the member person.

To use the member relationship as a pricing parameter, you need to define the Member Relationship parameter where:

- **Value Type** is to **Adhoc**
- **Source Entity** is set to **Membership Person**
- **Source Type** is set to **Characteristic**
- **Source Type Code** is set to a characteristic type which is specified in the **Member Relationship Characteristic Type** attribute of the member relationship and subscription tier preference
- **Parameter Usage** is set to **Price Item** and **Pricing Eligibility Criteria**

Once the Member Relationship parameter is defined, you need to associate the parameter with the price items for which you want to define different rates in a pricing rule using the parameter. This helps to define different base fee for a price item based on the member relationship.

A new screen named **Member Relationship/Subscription Tier Structure** is introduced in this release. It enables you to add, edit, copy, and delete the member relationship and subscription tier structures.

Subscription Tier Pricing Parameter

Oracle Revenue Management and Billing enables you to use the subscription tier as a pricing parameter while defining the tier based pricing rules. This feature facilitates you to offer different rates for a price item based on different subscription tier.

On creating the bill period timelines, the system executes the **Derive Subscription Tier for Membership (C1-DERSUBTR)** algorithm attached to the **Account and Price Item Derivation Post-Processing** system event in the respective tier based pricing rule type. This algorithm determines the subscription tier of the membership for each bill period timeline. While determining the subscription tier for a membership, the system derives subscription tier for the membership from a subscription tier structure. Note that while deriving the subscription tier of a membership for a bill period timeline, the system refers the proration rules defined on the respective policy plan and accordingly derives the subscription tier for the membership. The system invokes the **C1-DERSUBTR** algorithm in the **C1-REPC1** batch.

You can define a subscription tier structure through a characteristic on the policy plan. While defining a subscription tier structure for a policy plan, you must use the characteristic type specified in the **Subscription Tier Structure Characteristic Type** attribute of a member relationship and subscription tier preference. The system considers the member relationship and subscription tier preference which is specified in the **Relation Structure Code Field Mapping** option type of the **C1-ASOBLNG** feature configuration.

A subscription tier structure helps the system to determine the subscription tier to which the membership belongs. You can specify a list of subscription tiers in a subscription tier structure. A subscription tier is derived for a membership depending on the following:

- Whether the member person is a self, spouse, or dependent
- Number of spouses, dependents, and young adults in the membership in the respective bill period timeline

A relationship matrix indicates whether a member person with a particular relationship type should be considered as self, spouse, or dependent while deriving the subscription tier. In a subscription tier structure, a spouse is never considered as a dependent. Only children are considered as dependents.

For example, you can create a subscription tier structure named STEX1 as shown below:

Subscription Tier	Self	Number of Spouses	Number of Dependents	Number of Young Adults
E	1	0	0	0
ES	1	1	0	0
ESC1	1	1	1	0
ESC2	1	1	2	0
EC1	1	0	1	0
EC2	1	0	2	0
EC3	1	0	3	0
F	1	9	9	9

Note: You can only define one subscription tier in a subscription tier structure where the sum of self, number of spouses, number of dependents, and number of young adults exceeds the maximum member count specified in the subscription tier structure.

In addition, you can create a relationship matrix in the STEX1 subscription tier structure as shown below:

Relation	Relationship Type	Relationship
Main Subscriber	Owner	Self
Main Subscriber	Member	Self
Children	Child	Dependent
Spouse	Wife	Spouse

Relation	Relationship Type	Relationship
Spouse	Spouse	Spouse

Once the subscription tier structure is derived from the policy plan, the system determines the subscription tier of the membership for the bill period timeline. While determining the subscription tier of a membership for the bill period timeline, the system derives the following characteristic types from the respective attributes of the member relationship and subscription tier preference:

- Age Calculation Date Basis
- Max Age Limit for Max Dependent Count
- Max Number of Dependents Order Priority
- Maximum Number of Dependents
- New Born Gift Days
- New Born Gift Days Applicability
- Young Adult Max Age Limit
- Young Adult Max Age Limit Applicability

The system then derives these characteristics from the policy plan. For example, if a membership with the following member persons is added to a policy plan:

Member Start Date	Member End Date	Person Name	Main Subscriber	Relationship Type	Member	Date of Birth
1-Jan-20	31-Dec-20	Mark	Yes	Self	Yes	15-Jan-68
1-Jan-20	31-Dec-20	Nancy	No	Wife	Yes	20-Apr-72
1-Jan-20	31-Dec-20	Roger	No	Child	Yes	15-May-01
1-Jan-20	31-Dec-20	Tom	No	Child	Yes	16-May-04

Now, if the following characteristics are defined on the policy plan:

- Subscription Tier Structure - STEX1
- Age Calculation Date Basis – Enrollment Date
- Maximum Number of Dependents – 3
- Max Number of Dependents Order Priority - ELDEST
- Max Age Limit for Max Dependent Count – 21
- New Born Gift Days - 30
- New Born Gift Days Applicability - Y
- Young Adult Max Age Limit - 25
- Young Adult Max Age Limit Applicability - Y

The system considers the STEX1 subscription tier structure and derives the subscription tier of the membership for each bill period timeline as shown below:

Bill Period Timeline	Characteristic Type	Characteristic Value
1-Jan-20 to 31-Jan-20	Subscription Tier	ESC2
1-Feb-20 to 29-Feb-20	Subscription Tier	ESC2
1-Mar-20 to 31-Mar-20	Subscription Tier	ESC2
1-Apr-20 to 30-Apr-20	Subscription Tier	ESC2
1-May-20 to 31-May-20	Subscription Tier	ESC2
1-Jun-20 to 30-Jun-20	Subscription Tier	ESC2
1-Jul-20 to 31-Jul-20	Subscription Tier	ESC2
1-Aug-20 to 31-Aug-20	Subscription Tier	ESC2
1-Sep-20 to 30-Sep-20	Subscription Tier	ESC2
1-Oct-20 to 31-Oct-20	Subscription Tier	ESC2
1-Nov-20 to 30-Nov-20	Subscription Tier	ESC2
1-Dec-20 to 31-Dec-20	Subscription Tier	ESC2

Because the characteristic value is same across all bill period timelines, the system will create one subscription tier characteristic with the effective date as 01-Jan-2020. Now, assume if one more member person named Harry with the date of birth as 05-11-08 and relationship type as Child is added to the membership on 05-Mar-20, then the system derives the subscription tier of the membership for each bill period timeline as shown below:

Bill Period Timeline	Characteristic Type	Characteristic Value
5-Mar-20 to 31-Mar-20	Subscription Tier	F
1-Apr-20 to 30-Apr-20	Subscription Tier	F
1-May-20 to 31-May-20	Subscription Tier	F
1-Jun-20 to 30-Jun-20	Subscription Tier	F
1-Jul-20 to 31-Jul-20	Subscription Tier	F
1-Aug-20 to 31-Aug-20	Subscription Tier	F
1-Sep-20 to 30-Sep-20	Subscription Tier	F
1-Oct-20 to 31-Oct-20	Subscription Tier	F
1-Nov-20 to 30-Nov-20	Subscription Tier	F
1-Dec-20 to 31-Dec-20	Subscription Tier	F

In this case, the system will have two subscription tier characteristics for the membership – one with the effective date as 01-Jan-2020 where the characteristic value is set to **ESC2** and another with the effective date as 05-Mar-2020 where the characteristic value is set to **F**.

If a new born is added to the membership, the effective date of the new subscription tier characteristic is calculated considering the gift days if applicable. If a member person is end dated, the system derives the subscription tier of the membership once again. If the subscription tier for the membership is different, the system creates a new characteristic to store the subscription tier for the membership. The effective date of the new characteristic is set according to the proration rule defined for the termination event. If a member person is inactivated, the system derives the subscription tier of the membership once again. In this case, if the subscription tier for the membership is different, the system updates the existing subscription tier characteristic of the membership.

To use the subscription tier as a pricing parameter, you need to define the Subscription Tier parameter where:

- **Value Type** is to **Adhoc**
- **Source Entity** is set to **Membership**
- **Source Type** is set to **Characteristic**
- **Source Type Code** is set to a characteristic type which is specified in the **Subscription Tier Characteristic Type** attribute of the member relationship and subscription tier preference
- **Parameter Usage** is set to **Price Item** and **Pricing Eligibility Criteria**

Once the Subscription Tier parameter is defined, you need to associate the parameter with the price items for which you want to define different rates in a pricing rule using the parameter. This helps to define different base fee for a price item based on the subscription tier.

A new screen named **Member Relationship/Subscription Tier Structure** is introduced in this release. It enables you to add, edit, copy, and delete the member relationship and subscription tier structures.

COBRA Membership

Until now, you were able to maintain an active employee coverage membership and create age based and tier based premium charges for the membership in Oracle Revenue Management and Billing. Now, in addition, you can maintain a COBRA membership and charge premium and administration fee for the COBRA membership in Oracle Revenue Management and Billing.

In COBRA membership, an employer provides temporary continuation of group health coverage in certain situations where it would otherwise be terminated. This may be include situations, such as:

- Death of the covered employee
- Reduction in the hours or termination of the covered employee's employment
- Covered employee becoming entitled for Medicare
- Divorce or legal separation from the covered employee
- A dependent child ceasing to be a dependent in an active employee coverage membership

Oracle Revenue Management and Billing enables you to create and edit a COBRA membership from the user interface and through a health care inbound message. While creating a COBRA membership, the membership type must be set to **COBRA**. Through a health care inbound message, the system must receive the end date of the active employee coverage membership along with the details of the COBRA membership. The system also requires the following information to create charges for a COBRA membership:

- Whom to bill the COBRA membership (i.e. billing arrangement details)
- Age based or tier based pricing rules using which the premium is calculated for the COBRA membership
- Additional charge pricing rules using which the administration fee is calculated for the COBRA membership

The system supports the following billing arrangements for the COBRA membership:

- **Group Billing** – Here, a COBRA membership is billed to a bill group which is derived for the COBRA membership.
- **TPA Billing** – Here, a COBRA membership is billed to the third party administrator (i.e. TPA person).
- **Direct Billing** – Here, a COBRA membership is billed to the member who is financially responsible for the COBRA membership.

You can indicate the billing arrangement for the COBRA memberships by defining a characteristic on the policy plan, policy, or parent customer. The system searches for the characteristic which is specified in the **Cobra Billing Arrangement** option type of the **C1-ASOBLNG** feature configuration on the following entities in the specified sequence:

1. Policy Plan
2. Policy
3. Parent Customer

Through a health care inbound message, you can create a third party administrator (i.e. TPA person) and its accounts. While sending the details of a TPA person through an inbound message, you must specify the parent of the TPA person and its account details. The system associates the parent customer with the TPA person using the relationship type which is specified in the **TPA Person Relationship Type** option type of the **C1-ASOBLNG** feature configuration. If the person type specified in the health care inbound message matches the person type specified in the **TPA Person Type** option type of the **C1-PERSTYPE** feature configuration, the system creates or updates the TPA person and its account through a customer registration object. However, if the person type specified in the health care inbound message does not match the person type specified in the **TPA Person Type** option type of the **C1-PERSTYPE** feature configuration, the system creates or updates the TPA person and its accounts directly and not through a customer registration object.

The system associates the TPA person with the TPA account using the relationship type which is specified in the **TPA Account Relationship Type** option type of the **C1-ASOBLNG** feature configuration. The system requires the TPA person and its account to bill the COBRA memberships when the COBRA billing arrangement is set to **TPA Billing**.

Similarly, through a health care inbound message, you can create an account for a member person who is financially responsible for the COBRA membership. The system requires the member person's account to bill the COBRA membership when the COBRA billing arrangement is set to **Direct Billing**.

On creating the TPA or member person account, the system automatically creates the distinct contract using each contract type for the parent customer and bill group policies on the TPA or member person account, respectively.

Administration Fee Pricing for COBRA Membership

Oracle Revenue Management and Billing enables you to charge the administration fee for a COBRA membership. The system enables you to charge a flat or percentage based administration fee on the COBRA membership premium.

A new pricing rule type category named **Capitation Fee** and the new business objects named **Fully Insured Capitation Fee Pricing Rule Type (C1-PrcRuleTypeCapitationFee)** and **Capitation Fee Pricing Rule (C1-PricingRuleCapitationFee)** are introduced in this release. This enables you to create the additional charge pricing rules where you can define different base and modifier fees based on the following pricing parameters:

- Membership attributes
- Member person attributes

You can create or edit a flat or percentage based additional charge pricing rule only through a health care inbound message and not from the user interface. You can define an additional charge pricing rule at the policy plan, policy, parent customer, or state level. The following table describes the information that you need to provide in a health care inbound message while defining or editing an additional charge pricing rule on a policy plan, policy, parent customer, or state:

Entity Type	Entity Identifiers
Policy Plan	Policy, Plan, and Source
Policy	Policy and Source
Parent Customer	Person Identifier Type and Person Identifier Value
State	State

You can view an additional charge pricing rule defined on a policy plan, policy, parent customer, or state through the **Customer 360° View** screen. You can also view an additional charge pricing rule defined on a state through the **State** screen.

You can create an additional charge pricing rule using an additional charge pricing rule type. You can create an additional charge pricing rule type from the user interface and not through a health care inbound message. While creating an additional charge pricing rule type, you must select the **Fully Insured Capitation Fee Pricing Rule Type** business object and set the pricing rule type category to **Capitation Fee**. The administration fee is always charged per subscriber and not per member, and therefore you must set the pricing rule type sub category to **Per Subscriber**. Here, you must specify the algorithms for the following system events:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Account and Price Item Derivation Post-Processing	C1-BILLPDRV
Billable Charge Creation Post-Processing	C1-FICRETBC
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_TIERPREM

In addition, you must specify the price items for which you can create additional charge pricing rules using the additional charge pricing rule type. An additional charge pricing rule type is not a primary pricing rule type. You must include an additional charge pricing rule type as a related pricing rule type in the age-based or tier based pricing rule types which are used for calculating the COBRA membership premium. This is because the administration fee is charged along with the COBRA membership premium.

If the pricing type in the additional charge pricing rule is set to **Flat**, the system charges a flat administration fee for the COBRA membership. But, if pricing type in the additional charge pricing rule is set to **Percent**, the system calculates and charges the percentage based administration fee on the COBRA membership premium.

The system derives the additional charge pricing rule for a price item from the following entities in the specified order:

1. Policy Plan
2. Policy
3. Parent Customer
4. State (using the State of Issue feature)

Medicare Membership

Until now, you were able to maintain an active employee coverage membership for a fully-insured large group customer and create age based or tier based premium charges for the membership in Oracle Revenue Management and Billing. Now, in addition, you can maintain an employer sponsored group medicare membership (800 series plans) for a fully-insured large group customer and create age based or tier based premium charges for the Medicare Part A, Part B, and Part D in Oracle Revenue Management and Billing. A Medicare beneficiary may qualify for a low income subsidy (LIS) for Medicare Part D or may incur late enrollment penalty (LEP) for Medicare Part D. In such case, the system enables you to consider

the low income subsidy (LIS) and late enrollment penalty (LEP) while calculating the Medicare Part D premium.

Oracle Revenue Management and Billing enables you to create and edit a Medicare membership from the user interface and through a health care inbound message. Ideally, a Medicare membership will have only one member person who is covered for Medicare and who is financially responsible for the membership. While creating a Medicare membership, the membership type must be set to **Medicare**. Ideally, you must define a Medicare membership on a Medicare affiliated policy plan. A new field named **Benefit Type** appears while defining or editing a policy plan. Here, you can indicate whether the benefit type of the policy plan is **Commercial** or **Medicare Affiliated**. However, at present, the system does not validate whether a Medicare membership is defined on only a Medicare affiliated policy plan.

The system enables you to maintain the Medicare benefits (such as, Part A, Part B, Part D, Part D LIS, Part D LEP) of a member person through the **Benefit** feature. The system enables you to define and edit the Medicare benefits from the user interface and through a health care inbound message. A new screen named **Benefit** is introduced in this release. It enables you to define, edit, and discard a benefit for Medicare Part A, Part B, Part D, Part D LIS, and Part D LEP.

While defining a Medicare benefit of a member person for Part A, Part B, and Part D, you need to specify a Medicare plan benefit package which is already defined. The system enables you to define or edit a Medicare plan benefit package through the **Field Mapping** screen. You can use the Medicare plan benefit package as a pricing parameter in the age based or tier based pricing rules using which the Medicare premium is calculated. While defining a Medicare benefit of a member person for Part D LIS and Part D LEP, you need to specify the benefit amount (i.e. subsidy or penalty amount).

On editing a Medicare benefit of a member person, the system inactivates the old record and creates a new record in the system. The status of the old benefit record is set to **Inactive** and the status of the new benefit record is set to **Active**.

The system requires the following information to create charges for a Medicare membership:

- Whom to bill the Medicare membership (i.e. billing arrangement details)
- Age based or tier based pricing rules using which the premium is calculated for the Medicare Part A, Part B, and Part D.
- Respective age based, tier based, and benefit pricing rule types associated with the Medicare affiliated policy plan

The system supports the following billing arrangements for the Medicare membership:

- **Group Billing** – Here, a Medicare benefit is billed to a bill group which is derived for the Medicare membership.
- **Direct Billing** – Here, a Medicare benefit is billed to a member person who is financially responsible for the Medicare membership.

You can indicate the billing arrangement for the Medicare memberships by defining a characteristic on the policy plan, policy, or parent customer. The system searches for the characteristic which is specified in the **Benefit Billing Arrangement** option type of the **C1-ASOBLLNG** feature configuration on the following entities in the specified sequence:

1. Policy Plan
2. Policy
3. Parent Customer

Note: If the benefit billing arrangement characteristic is not defined on any of the above listed entities, the system, by default, charges the Medicare membership premium to the bill group.

Through a health care inbound message, you can create an account for a member person who is financially responsible for the Medicare membership. The system requires the member person's account to bill the Medicare membership when the Benefit billing arrangement is set to **Direct Billing**. Once the member person account is created, the system automatically creates the distinct contract using each contract type for the parent customer and bill group policies on the member person account.

Medicare Part D LIS and LEP Pricing

Oracle Revenue Management and Billing enables you to consider the low income subsidy (LIS) and late enrollment penalty (LEP) while calculating the Medicare Part D premium. A new pricing rule type category named **Benefit** and a new business object named **Fully Insured Benefit Pricing Rule Type (C1-PrcRuleTypeBenefit)** are introduced in this release.

The system refers the benefit pricing rule type associated with the Medicare affiliated policy plan to determine the price items which should be charged for LIS and LEP. While creating a benefit pricing rule type, you must select the **Fully Insured Benefit Pricing Rule Type** business object and set the pricing rule type category to **Benefit**. Here, you must specify the algorithms for the following system events:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Account and Price Item Derivation Post-Processing	C1-BILLPDRV
Billable Charge Creation Post-Processing	C1-FICRETBC
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_MEDIPREM

In addition, you must specify the price items for which the charge should be created when the benefit sub type is **LIS** or **LEP**. Here, you must specify the parameter based eligibility rule type for the price item. The system then creates a charge for LIS or LEP when the rule is satisfied.

Bill Cycle and Bill Period Derivation

Oracle Revenue Management and Billing uses the bill cycle of an account to generate the bills for the account and the bill period of an account to create the billable charges for the account. If the bill cycle and bill period used for an account are not in sync, the system will not give the desired output. Therefore, we have introduced a new feature wherein the bill cycle and bill period can be tightly coupled with each other.

You can define a billing preference wherein you pair the bill cycle and bill period. The system enables you to define, edit, delete, and copy a billing preference through the **Field Mapping** screen. The system derives the bill cycle and bill period for an account using the billing preference. You can set the billing preference for an account through a characteristic type which is specified in the **Bill Cycle Rule Code** option type of the **C1-ASOBLNG** feature configuration. Note that you must specify a characteristic type where the characteristic entity is set to **Account** in the **Bill Cycle Rule Code** option type. You can define this characteristic for an account from the user interface or through a health care inbound message.

Whenever you create or edit an account through a health care inbound message, the system checks whether the characteristic type specified in the **Bill Cycle Rule Code** option type of the **C1-ASOBLNG** feature configuration is available for the account in the inbound message. If so, the system checks whether the value specified for the billing preference characteristic type is already defined in the system. If so, the system derives the bill cycle from the billing preference when the account is created. In such case, the system ignores the bill cycle available in the inbound message. In addition, when the billing preference characteristic is updated for an account, the system derives the new bill cycle from the respective billing preference in the system.

If the characteristic type specified in the **Bill Cycle Rule Code** option type of the **C1-ASOBLNG** feature configuration is not available for the account in the inbound message, the system stores the bill cycle received in the inbound message for the account.

Until now, the system derived the bill period for an account using the **Invoice Day (C1OFFRST)** characteristic of the account. Now, you can derive the bill period for an account using the billing preference characteristic of the account. To derive the bill period from the billing preference, you need to attach the **Bill Period Derivation (C1-BILLPDRV)** algorithm to the **Account and Price Item Derivation Post-Processing** system event in the age based, tier based, additional charge, and benefit pricing rule types. The system invokes the **Bill Period Derivation (C1-BILLPDRV)** algorithm in the **C1-REPC1** batch. This algorithm derives the bill period from the billing preference of the account and accordingly updates the **RECURRING_FLG** and **RECURRING_VAL** columns of the corresponding records in the **CI_REPRC_REQ_DTL** table.

Premium Proration Rules

Until now, the system used the service quantity rule named **PR** attached to the **HCPREMPS** rate schedule to calculate the proration factor for the membership premium. Now, Oracle Revenue Management and Billing enables you to prorate the membership premium using the proration rules defined on the fully-insured policy plan. A proration rule indicates how you want to prorate the membership premium on various events, such as enrollment, termination, etc. In a proration rule, you need to specify the following:

- **Effective Date** – Used to specify the date from when the proration rule is effective. However, the system considers the latest proration rule and not the effective proration rule while prorating the membership premium.
- **Proration Event Type** – Used to indicate the event when the membership premium should be prorated. The valid values are:
 - **Enrollment** – Used to indicate that you want to prorate the membership premium on enrollment based on the specified proration type.
 - **Termination** - Used to indicate that you want to prorate the membership premium on termination based on the specified proration type.
 - **New Born** - Used to indicate that you want to prorate the membership premium on new born enrollment based on the specified proration type.
 - **Same Month Enrollment and Termination** - Used to indicate that you want to prorate the membership premium when the member person enrolls and terminates in the same month based on the specified proration type.
- **Proration Type** – Used to indicate how you want to prorate the membership premium. The valid values are:
 - **Daily** – Used to indicate that you want to prorate the membership premium from the day the proration event has occurred.
 - **Mid-Month** – Used to indicate that you want to prorate the membership premium based on the proration date. The system calculates the proration date using the following formula: Bill Period Start Date – Specified Number of Days. For example, if the bill period start date is 1st of every month and number of days is 15, then the proration date would be 15th of every month. If a member person is enrolled to the membership on or before the proration date, the system will charge the premium for the member person. However, if a member person is enrolled to the membership after the proration date, the system will not charge the premium for the member person. And, if a member person is terminated from the membership on or after the proration date, the system will charge the premium for the member person. However, if a member person is terminated from the membership before the proration date, the system will not charge the premium for the member person.
 - **Full Month** – Used to indicate that the premium for a member person should be charged only when the member person is enrolled or terminated on the coverage start date or coverage end date, respectively. If a member person is enrolled or terminated within the coverage period, the system will not charge the premium for the member person.

- **Waiver** – Used to indicate that the premium for a member person should be waived off completely for the month when the member person is enrolled or terminated from the membership.
- **Coverage Days** – Used to indicate that you want to prorate the premium for a member person based on the coverage days. If a member person is covered in the membership for a period less than the specified number of days, the system will not charge the premium for the member person. However, if a member person is covered in the membership for a period equal to or more than the specified number of days, the system will charge the premium for the member person. You can use this proration type only when the proration event is set to **Same Month Enrollment and Termination**.
- **Enrollment** – Used to indicate that you want to prorate the premium for a member person using the proration type of the enrollment event. You can use this proration type only when the proration event is set to **Same Month Enrollment and Termination**.
- **Termination** - Used to indicate that you want to prorate the premium for a member person using the proration type of the termination event. You can use this proration type only when the proration event is set to **Same Month Enrollment and Termination**.
- **Number of Days** – Used to specify the number of days to determine the cutoff date when the proration type is set to **Mid-Month** or **Coverage Days**.

The following table indicates the proration types which are applicable for a particular proration event:

Proration Event	Proration Type
Enrollment	Daily, Mid-Month, Full Month, Waiver
Termination	Daily, Mid-Month, Full Month, Waiver
New Born	Daily, Mid-Month, Full Month, Waiver
Same Month Enrollment and Termination	Coverage Days, Enrollment, Termination, Waiver

Note that if the proration rule is not defined for the **New Born** event, the system uses the proration rule of the **Enrollment** event. The system enables you to define and edit the proration rules for a policy plan from the user interface or through a health care inbound message.

Once the membership premium is calculated either using an age based or tier based pricing rule, the system checks whether the proration rules are defined for the respective policy plan. If so, the system sets the base amount of the corresponding record in the **CI_PRCE_CALC_LN** table to the calculated premium amount. However, if the proration rules are not defined for the respective policy plan, the system sets the base amount of the corresponding record in the **CI_PRCE_CALC_LN** table to the calculated premium amount and proration factor is set to 1.

The system then executes the **C1-AGEPRFC** or **C1-TIERPRFC** algorithm attached to the **Pricing Rule Proration Amount Calculation** system event in the respective age based or tier based pricing rule type. The system invokes these algorithms in the **C1-REPC2** batch. These algorithms derive the proration event for a bill period timeline and accordingly updates the proration factor of the bill period timeline to 1 or 0 for all proration types except Daily. The proration factor is set to 1 when the premium for eligible member

person (in case of age based pricing) and the premium for the membership (in case of tier based pricing) should be charged for the bill period timeline. And, proration factor is set to 0 when the premium for eligible member person (in case of age based pricing) and the premium for the membership (in case of tier based pricing) should not be charged for the bill period timeline. In case of the Daily proration type, the proration factor is calculated using the following formula: Number of Days Covered in the Coverage Period/Coverage Period

In case of tier based pricing, the system uses the subscription tier characteristic of the membership to determine the proration event.

Bill Period Timeline

Now, you need to attach the **C1-BILLRPCR** algorithm to the **Account and Price Item Derivation Post-Processing** system event in the age based and tier based pricing rule types. It enables you to create an additional entry in the **CI_REPRC_REQ_DTL** table for the remaining months in the membership coverage period based on the bill period. For example, a record exists with the effective date as 01-01-2020 in the **CI_REPRC_REQ_DTL** table with a bill period where the bill dates start from 1st of every month and with a membership coverage period from 01-01-2020 to 12-31-2020. On executing the **C1-BILLRPCR** algorithm, the system will create the additional entries with the following effective dates in the **CI_REPRC_REQ_DTL** table:

Bill Period	Effective Date
02-01-2020 to 02-29-2020	02-01-2020
03-01-2020 to 03-31-2020	03-01-2020
04-01-2020 to 04-30-2020	04-01-2020
05-01-2020 to 05-31-2020	05-01-2020
06-01-2020 to 06-30-2020	06-01-2020
07-01-2020 to 07-31-2020	07-01-2020
08-01-2020 to 08-31-2020	08-01-2020
09-01-2020 to 09-30-2020	09-01-2020
10-01-2020 to 10-31-2020	10-01-2020
11-01-2020 to 11-30-2020	11-01-2020
12-01-2020 to 12-31-2020	12-01-2020

9/10 Billing (Skip Months)

In the health insurance domain, for a yearly coverage, the membership premium is calculated and billed every month. The fully insured large groups such as school districts have two-three months of holiday every year. Usually, they prefer to distribute the off months' premium in the remaining months of the coverage period. Oracle Revenue Management and Billing enables you to handle this requirement through the **9/10 Billing (Skip Months)** feature. Note that, in this feature, only the recurring charges for membership premium and administration fees will be considered for distribution in the non-skip months of the coverage period.

You can set the skip months in a billing preference through the **Field Mapping** screen. You can specify one or more skip months in a billing preference which may be continuous or non-continuous. However, you cannot skip all 12 months in a billing preference. The system derives the skip months for an account using the billing preference. You can set the billing preference for an account through a characteristic type which is specified in the **Bill Cycle Rule Code** option type of the **C1-ASOBLNG** feature configuration. Note that you must specify a characteristic type where the characteristic entity is set to **Account** in the **Bill Cycle Rule Code** option type. You can define this characteristic for an account from the user interface or through a health care inbound message. You can view a list of accounts for which skip months are defined in the billing preference using the **Skip Months** field in the **360° Search** zone.

A new column named **DIS_AMT** is added to the **CI_PRCE_CALC** and **CI_PRCE_CALC_LN** tables. While calculating the membership premium using the age based or tier based pricing rule, the system checks whether the skip months are defined for the account. If the skip months are not defined for the account, the system stores the calculated premium in the **DIS_AMT** column.

A new algorithm type named **C1-SKPMNTHPC** is introduced in this release. To setup the **9/10 billing** feature, you need to create an algorithm using the **C1-SKPMNTHPC** algorithm type and attach it to the **Skip Month Premium Calculation** system event of the required age based and tier based pricing rule types. The system invokes this algorithm in the **C1-REPC3** batch. This algorithm distributes the total premium in the non-skip months of the coverage period. In case of an age based pricing, the system calculates the distributed amount for each eligible member in the membership. And, in case of a tier based pricing, the system calculates the distributed amount for the membership. When a billable charge is created for a non-skip month through the **C1-FIBCR** batch, the distributed amount is stored through an SQI on the billable charge.

Self-Funded Pricing Rule Versioning

Until now, the system enabled you to edit a self-funded pricing rule only when it is not referred for any transaction in the system. If you wanted to edit a referred pricing rule, you had to manually cancel bill segments of the accounts and create the disaggregation and/or reseeding requests for the accounts. Once the transactions are disaggregated, the system allowed you to edit the self-funded pricing rule.

Now, the system enables you to edit a self-funded pricing rule even when it is referred for a transaction in the system. On editing a referred self-funded pricing rule, the system will do the following:

- Automatically cancel the bill segments of the accounts and create the disaggregation and/or reseeding requests for the accounts
- Increment the version of the referred self-funded pricing rule in the system

Now, the system maintains version numbers for a self-funded pricing rule. On creating a self-funded pricing rule, the version number of the self-funded pricing rule is set to 1. Also, when a self-funded policy is renewed, the version number of each self-funded pricing rule is set to 1.

If a self-funded pricing rule is referred for a transaction, the system creates a new version of the self-funded pricing rule when you edit it. The system does versioning of a self-funded pricing rule only when a set of pre-defined fields are edited. For more information about the fields for which versioning is configured, refer to *Oracle Revenue Management and Billing Insurance User Guide*. The system will automatically cancel the bill segments and create the disaggregation and/or reseeding requests for the accounts only when you implement the **Entity Audit** feature for the self-funded pricing rules. The entity audit framework is configured for the following business objects in this release:

- C1-PricingRuleAncillary
- C1-PricingRuleClaim
- C1-PricingRuleRetEnroll
- C1-PricingRuleRetTypeClaim
- C1-PricingRuleASL
- C1-PricingRuleSSL
- C1-PricingRuleLevelFunded
- C1-PricingRuleDiscArrangement

The **Eligible for Audit Event** option type in all the above listed business objects is set to **Y** and the **C1-PRVERSION** algorithm is attached to the **Audit** system event of the above listed business objects.

To implement the **Entity Audit** feature, you need to create an active audit event type for the above listed business objects where the audit usage is set to **Disaggregation/Reseeding**. Here, you need to specify a list of fields from the respective business object which you want to audit or monitor. The following audit event types are shipped for the respective pricing rule business object:

Business Object	Audit Event Type
C1-PricingRuleAncillary	ANCIL_DISAGG_AUD
C1-PricingRuleClaim	CLAIM_DISAGG_AUD
C1-PricingRuleRetEnroll	ENROL_RETEN_DISAGG_AUD
C1-PricingRuleRetTypeClaim	CLAIM_RETEN_DISAGG_AUD
C1-PricingRuleASL	ASL_DISAGG_AUD
C1-PricingRuleSSL	SSL_DISAGG_AUD

Business Object	Audit Event Type
C1-PricingRuleLevelFunded	LF_DISAGG_AUD
C1-PricingRuleDiscArrangement	DISC_DISAGG_AUD

You can use the above audit event types or create a custom audit event type for the required business object. On editing a referred self-funded pricing rule, the system does the following:

If...	Then...
<p>The approval workflow process is configured for the respective pricing rule and you edit a field which is:</p> <ul style="list-style-type: none"> Listed in the active audit event type of the respective business object Configured for versioning 	<p>The system creates an approval transaction for the self-funded pricing rule. On approving the approval transaction, the system creates a new version of the self-funded pricing rule where the version number is incremented by 1. The status of the new version of the self-funded pricing rule is set to Disaggregation Initiated. In addition, the system creates an audit event using the active audit event type for the new version of the self-funded pricing rule. The status of the audit event is set to Pending.</p>
<p>The approval workflow process is not configured for the respective pricing rule and you edit a field which is:</p> <ul style="list-style-type: none"> Listed in the active audit event type of the respective business object Configured for versioning 	<p>The system creates a new version of the self-funded pricing rule where the version number is incremented by 1. The status of the new version of the self-funded pricing rule is set to Disaggregation Initiated. In addition, the system creates an audit event using the active audit event type for the new version of the self-funded pricing rule. The status of the audit event is set to Pending.</p>
<p>The approval workflow process is configured for the respective pricing rule and you edit a field which is:</p> <ul style="list-style-type: none"> Not listed in the active audit event type of the respective business object Configured for versioning 	<p>The system creates an approval transaction for the self-funded pricing rule. On approving the approval transaction, the system creates a new version of the self-funded pricing rule where the version number is incremented by 1. The status of the new version of the self-funded pricing rule is set to Active and the status of the old version of the self-funded pricing rule is changed to Inactive.</p>
<p>The approval workflow process is not configured for the respective pricing rule and you edit a field which is:</p> <ul style="list-style-type: none"> Not listed in the active audit event type of the respective business object Configured for versioning 	<p>The system creates a new version of the self-funded pricing rule where the version number is incremented by 1. The status of the new version of the self-funded pricing rule is set to Active and the status of the old version of the self-funded pricing rule is changed to Inactive.</p>
<p>The approval workflow process is configured for the respective pricing rule and you edit the end</p>	<p>The system creates an approval transaction for the self-funded pricing rule. On approving the</p>

If...	Then...
date of a self-funded pricing rule which is referred for a transaction after the pricing rule end date	approval transaction, the changes are reflected in the existing version of the self-funded pricing rule. Note that the system does not create a new version of the self-funded pricing rule. The system creates an audit event using the active audit event type for the existing version of the self-funded pricing rule. The status of the audit event is set to Pending .
The approval workflow process is not configured for the respective pricing rule and you edit the end date of a self-funded pricing rule which is referred for a transaction after the pricing rule end date	The system does not create a new version of the self-funded pricing rule. The changes are reflected in the existing version of the self-funded pricing rule. The system creates an audit event using the active audit event type for the existing version of the self-funded pricing rule. The status of the audit event is set to Pending .

Note that the new version of the self-funded pricing rule will have the same pricing rule ID. However, on editing a self-funded pricing rule which is not referred for a transaction, the system edits the existing version of the self-funded pricing rule and does not create a new version of the self-funded pricing rule with incremental version number.

A new batch named **C1-DISTA** is introduced in this release. The **C1-DISTA** batch checks whether there are any audit events for the self-funded pricing rules in the **Pending** status. If an audit event for a self-funded pricing rule is in the **Pending** status, the system checks whether the self-funded pricing rule is created using a primary pricing rule type. If so, the system derives the person for whom the self-funded pricing rule is created. If the person type of the derived person is **Parent Customer**, the system fetches all accounts of the parent customer and its bill groups. However, if the person type of the derived person is **Bill Group**, the system fetches all accounts of the bill group. Once the accounts are derived, the system cancels the bill segments of the accounts and creates a disaggregation request for these accounts. The system then confirms whether you want to create reseeding requests for the related pricing rule types (if any). If you click the **OK** button, the system creates the reseeding requests. While creating a reseeding request for a related pricing rule type, the system derives all accounts from the accumulation group and then creates a reseeding request for each such account. Finally, the batch changes the status of the audit event to **Complete**.

Once the disaggregation and reseeding requests are created for the accounts, you need to disaggregate the transactions using the disaggregation batches. On executing the **C1-DRSUA** batch, the system changes the status of the disaggregation or reseeding request to **Complete** and then executes the **C1-UPDAUDEV** algorithm attached to the **Post-Processing** system event of the batch control. This algorithm changes the status of the new version of the self-funded pricing rule (for which disaggregation is completed) to **Active** and changes the status of the old version of the self-funded pricing rule to **Inactive**.

Note that you cannot edit a self-funded pricing rule in the **Active** status when an audit event for the self-funded pricing rule is in the **Pending** status. You cannot edit or delete a self-funded pricing rule which is in the **Disaggregation Initiated** status. Also, you cannot edit the related self-funded pricing rule in the

Active status when the new version of the primary self-funded pricing rule is in the **Disaggregation Initiated** status.

Age Monitoring

Age is one of the most critical factor in determining health insurance premium. Therefore, Oracle Revenue Management and Billing enables you to monitor age for premium calculation.

In the age based pricing, the premium is calculated for each eligible member person based on age, employee attributes and modifiers, and then aggregated to derive the total premium for the membership. Until now, the age of a member person was calculated using the member enrollment date, plan start date, or policy renewal or start date. Now, in addition, a new predefined value named **MEMNRAGE (Member Enrollment Nearest Age)** is added to the **Age Calculation Date Basis (C1-AGCAL)** characteristic type. If you set the **C1-AGCAL** characteristic type to **MEMNRAGE**, the system considers the number of days specified in the **C1-PPRAMAGE** algorithm to calculate the nearest age of a member person. The system then derives the rate using the nearest age of the member person and accordingly calculates the premium for the member person. For example, a member person with the date of birth as 02-15-1980 has enrolled to the HMO Med Bronze plan from 01-01-2020 to 12-31-2020. And, the **C1-AGCAL** characteristic type is set to **MEMNRAGE** on the HMO Med Bronze plan where the following age based pricing is defined:

Age Group	Rate Value
0-15	\$100.00
16-18	\$120.00
19-20	\$140.00
21-40	\$160.00
41-60	\$180.00
61-65	\$200.00
66-99	\$250.00

Let us assume that the **No. of Days** parameter in the **C1-PPRAMAGE** algorithm is set to **90**. The system will calculate the nearest age of the member person through a cutoff date which is calculated using the following formula: Member Enrollment Date + No. of Days. In this case, the cutoff date is 03-30-2020 (01-01-2020 + 90). If the birthday of the member person falls within the cutoff date, the system charges the premium based on the nearest age. However, if the birthday of the member person does not fall within the cutoff date, the system charges the premium based on the actual age. In this case, the birthday falls within the cutoff date, and therefore the premium will be charged using the rate defined for the 41-60 age group (i.e. \$180) and not using the rate defined for the 21-40 age group (i.e. \$160).

Oracle Revenue Management and Billing enables you to recalculate the age of a member person in a membership in the following scenarios:

- When the policy is renewed
- When the age changes

- From the next month when the age changes

A new characteristic type named **Age Recalculation Date Basis (C1-AGREC)** is introduced in this release. We support the following predefined list of values:

- AGECHNG (Age Changes)
- CHGAGNTMNT (Next Month)
- RENEWAL (Policy Renewal)

If you want to recalculate the membership premium for a plan based on the recalculated age of a member person, you need to do the following:

- Define the **Age Recalculation Date Basis (C1-AGREC)** characteristic for the policy plan or for the policy to which the plan belongs
- Set the **Age Re-Calculation Date Basis** attribute to **Age Recalculation Date Basis (C1-AGREC)** in the age based pricing rule type which is associated with the policy plan

The system does the following when you add a membership to a policy plan or a member person to a membership:

If the Age Recalculation Date Basis characteristic type is set to...	Then,
AGECHNG	The system creates an audit event for a member person when the birthday falls within the enrollment date range. Here, the effective date of the audit event is set to the birth date of the member person.
CHGAGNTMNT	The system creates an audit event for a member person when the birthday falls within the enrollment date range. Here, the effective date of the audit event is set to the billing date of the next month. For example, if the bill date in a bill period starts 1 st of every month and the date of birth of a member person is 05-10-2020, the effective date of the audit event is set to 01-11-2020.
RENEWAL	The system creates an audit event for a member person when the birthday falls within the new enrollment date range (i.e. from original policy end date+1 to new policy end date). Here, the effective date of the audit event is set to the birth date of the member person.

Apart from the membership premium recalculation, the **Age Recalculation Date Basis (C1-AGREC)** characteristic is used to evaluate the member relationship characteristic of each member person and subscription tier characteristic of the membership when the **Young Adult Applicability** characteristic is set to **Y** and the child or dependent enrolling to the membership becomes young adult in the enrollment period.

The **C1-FIAUDEV** algorithm is enhanced to support the age recalculation feature. It creates audit events in the C1_AUDIT_EVENT table and repricing entity detail records in the CI_REPRC_ENTITY_DTL table when the age of a member person changes within the enrollment period.

Enhancements (Generic)

This section lists the enhancements made to the following features which can be used in both financial services and insurance domains:

- [Statement Construct](#)
- [Terms and Conditions](#)
- [State](#)
- [Parameter](#)
- [Rules Engine](#)

Statement Construct

The following changes are made to the Statement Construct feature:

- A new field named **Statement Construct Identifier** is added in the **Main** tab of the **Statement Construct** screen. It allows you to specify a unique identifier for the statement construct. This field is not mandatory.
- You can define characteristics for a statement construct from the user interface and through a health care inbound message.

Terms and Conditions

The following changes are made to the Terms and Conditions feature:

- The **Terms and Conditions** screen is completely redesigned to enhance user experience. The following new fields are available while defining or editing the terms and conditions:
 - **Status** – Used to indicate whether the terms and condition is active or inactive. You can only associate active terms and conditions with a deal, price item, root level hierarchy entity, and non-root level hierarchy entity.
 - **Terms and Conditions Usage** – Used to indicate whether you want to use the terms and conditions for deal and/or for invoice extract.
 - **Terms and Conditions Applicability** – Used to indicate whether the terms and conditions are applicable for a deal, price item, root level hierarchy entity, or non-root level hierarchy entity. This field appears only when the terms and conditions usage is set to **Deal** or **Invoice and Deal**.
 - **Attach File** – Used to attach a file which contains the terms and conditions. You can attach a file in the DOC, XLS, PDF, JPG, TXT, AVI, BMP, MP3 or RTF format.

State

The following changes are made to the State screen:

- Now, you can view the additional charge pricing rules which are defined on a state from the **State** screen.

Parameter

The following changes are made to the Parameter screen:

- A new source entity named **Benefit** is added to the respective list. It enables you to create parameters whose value is derived from a Medicare benefit of a member person.
- A new parameter usage named **Rule Eligibility Criteria** is introduced in this release. If you select this option, you can use the parameter while defining a parameter based rule type.

Rules Engine

The following changes are made to the Rules Engine feature:

- Until now, you were able to create the field based rule types in the system. Now, in addition, you can create the parameter based rule types in the system. A new field named **Rule Type Category** appears when you set the rule type usage to **Price Item Eligibility** or **Related Pricing Rule Type Eligibility**. The rule type category indicates whether you want to create a field based or parameter based rule type.
- On selecting the **Parameter Based** option from the **Rule Type Category** list, the **Parameter** column appears in the **Input and Output Parameters** section. Here, you can specify a parameter whether the parameter usage is set to **Rule Eligibility Criteria**.
- While defining a parameter based rule, the system does not allow you to specify the output parameters in the rule.
- In a parameter based rule, you can only define a criteria using a parameter.

Enhancements (Specific to Financial Services)

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

- [Mapping Terms and Conditions](#)
- [Deal-Specific Terms and Conditions](#)
- [Deal Pricing and Commitments](#)
- [C1-Deal Feature Configuration](#)

Mapping Terms and Conditions

The following changes are made to the Mapping Terms and Conditions feature:

- Earlier, the **Mapping Terms and Conditions** screen enabled you to associate the terms and conditions with a price item and hierarchy entity. You could even associate the same terms and conditions with a price item and hierarchy entity.

Now, the **Mapping Terms and Conditions** screen enables you to associate only active terms and conditions with a price item, root level hierarchy entity, and non-root level hierarchy entity. The system enables you to associate:

- Only those terms and conditions with a price item where the terms and conditions applicability is set to **Price Item**
- Only those terms and conditions with a root level hierarchy entity where the terms and conditions applicability is set to **Root level Hierarchy Entity**
- Only those terms and conditions with a non-root level hierarchy entity where the terms and conditions applicability is set to **Non-Root Level Hierarchy Entity**
- Now, you can associate the terms and conditions with a price item, root level hierarchy entity, and non-root level hierarchy entity for a specific date range. It indicates that the terms and conditions are applicable for the respective entity in a deal only when the deal date range is within the terms and conditions date range.
- The **Mapping Terms and Conditions** screen is completely redesigned to enhance user experience.

Deal-Specific Terms and Conditions

The following changes are made to the Deal-Specific Terms and Conditions feature:

- Earlier, you were able to associate any terms and conditions with a deal. Now, you can associate only those terms and conditions with a deal where the terms and conditions applicability is set to **Deal** and which are in the **Active** status.

- Earlier, you were able to define deal-specific terms and conditions for a price item and hierarchy entity through the **Pricing and Commitments** screen. Now, you cannot define deal-specific terms and conditions for a price item, root level hierarchy entity, and non-root level hierarchy entity through the **Pricing and Commitments** screen. You can only view those terms and conditions associated with the respective entity (i.e. price item, root level hierarchy entity, non-root level hierarchy entity) which are effective during the deal date range.

Deal Pricing and Commitments

The following changes are made to the Pricing and Commitments screen:

- Earlier, you were able to view the pricing of the price items assigned to the customer or account in this screen. Now, along with the price item, you can view the price item hierarchy to which the price item belongs. In addition, you can view the following at the hierarchy entity level:
 - Original revenue (the sum of original revenue of all price items which are associated with the hierarchy entity)
 - Original cost (the sum of original cost of all price items which are associated with the hierarchy entity)
 - Proposed revenue (the sum of proposed revenue of all price items which are associated with the hierarchy entity)
 - Proposed cost (the sum of proposed cost of all price items which are associated with the hierarchy entity)
 - Original Volume (the sum of original volume of all price items which are associated with the hierarchy entity)
 - Proposed Commitments (the sum of proposed commitments of all price items which are associated with the hierarchy entity)
- The product level, division level, and deal level approver can see the recommended section when the **Propose Pricing** field is set to **Yes** for the respective To Do role in the deal approval profile.
- A section named **Product Financial Summary** is added to this screen. It enables you to view the original and proposed revenue and cost of each product in which the price items assigned to the customer or account are included.
- The **Deal Pricing** screen is completely redesigned to enhance user experience. On viewing the original pricing of a price item in a deal, the **Deal Pricing** screen appears where you can view the details of the respective original pricing. However, on viewing the proposed pricing of a price item in a deal, the **Deal Pricing** screen appears where you can view the details of the original pricing as well as respective proposed pricing.

C1-Deal Feature Configuration

The following option types are newly added in the **C1-Deal** feature configuration:

- Deal Compare Report
- Deal Limit in Months
- Deal Profitability Export Report
- Pricing Filter UI Pagination Limit
- Questionnaire UI Pagination Limit

Enhancements (Specific to Insurance)

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

- [Health Care Inbound Message](#)
- [Customer 360° View](#)
- [Health Insurance Policy](#)
- [Customer Registration](#)
- [Statement Construct](#)
- [Deferred Revenue Recognition](#)
- [C1-ASOBLLNG Feature Configuration](#)
- [Bill Group Derivation](#)
- [Age Based and Tier Based Pricing Rule Types](#)
- [Repricing](#)

Health Care Inbound Message

The following changes are made to the Inbound Message feature:

- Earlier, you were able to specify phone details of a person, such as phone type and phone number, in a health care inbound message. Now, in addition, you can specify the extension of the phone number.
- Earlier, you were able to define an active employee coverage membership through a health care inbound message. Now, in addition, you can define the following types of membership through a health care inbound message:
 - Employer Sponsored Group Medicare Membership (800 Series Plans)
 - COBRA Membership
- Now, you can specify whether the person is a member or non-member in the membership. For the Medicare and COBRA memberships, the system will calculate premium for the members and not for the non-members. However, for active employee coverage membership, the system will consider the eligible members as well as non-members in the membership during age based premium calculation. A new field named **Non-Covered Subscriber Eligible** is added in the Age Based pricing rule type. If you select the **Non-Covered Subscriber Eligible** option, the system will only consider the eligible members and not non-members of the active employee coverage membership during age based premium calculation.
- Now, you can specify whether the member person is financially responsible for the membership. When the billing arrangement is set to **Direct Billing** for the Medicare and COBRA memberships, the system will charge the premium directly to the person who is financially responsible for the membership. In such case, the financially responsible person should have an account on which the membership premium can be billed in the system.

- For Medicare memberships, you can define and edit various benefits of a member person through a health care inbound message. While editing a benefit of a member person, the system inactivates the old record and creates a new record in the system. The status of the old benefit record is set to **Inactive** and the status of the new benefit record is set to **Active**.
- Now, you can indicate the benefit type of the plan (i.e whether it is a commercial or medicare affiliated plan) through a health care inbound message. Also, you can define and edit the proration rules of a plan through a health care inbound message.
- Now, you can define and edit the flat and percentage based additional charge pricing rules for COBRA memberships through a health care inbound message. You can define the additional charge pricing rules on the policy, policy plan, state, and parent customer.
- Now, you can define and edit the statement construct of a person through a health care inbound message. While creating or editing the statement construct, the system uses the statement construct business object specified in the customer registration type.
- The following tags are added in the health care inbound message schema:

Parent Tag	New Tags
<phones>	<extension></extension>
<memberData>	<isMemberSw></isMemberSw> <isFinanciallyResponsibleSw></isFinanciallyResponsibleSw> <membershipType></membershipType> <externalMedicareBeneficiaryId></externalMedicareBeneficiaryId> <benefitData> <benefitDataList> <sequence></sequence> <startDate></startDate> <endDate></endDate> <benefitStatus></benefitStatus> <benefitSourceFlag></benefitSourceFlag> <benefitSubTypeFlag></benefitSubTypeFlag> <planBenefitPackageId></planBenefitPackageId> <benefitAmount></benefitAmount> <characteristics> <characteristicsList> <characteristicType></characteristicType> <characteristicValue></characteristicValue> <effectiveDate></effectiveDate> </characteristicsList> </characteristics> </benefitDataList> </benefitData>
<mainSubscriber>	<membershipType></membershipType>

Parent Tag	New Tags
<planData>	<benefitTypeFlag></benefitTypeFlag> <policyPlanProrationRuleList> <effectiveDate></effectiveDate> <prorationEventType></prorationEventType> <prorationType></prorationType> <numberOfDays></numberOfDays> </policyPlanProrationRuleList>
<pricingRuleData>	<pricingType></pricingType>
<customerStructureData>	<statementConstructsData> <personStatementConstructs> <personIdentifier></personIdentifier> <personIdentifierType></personIdentifierType> <statementConstructIdentifier></statementConstructIdentifier> <statementAddressSource></statementAddressSource> <statementCycle></statementCycle> <statementRouteType></statementRouteType> <effectiveStatus></effectiveStatus> <addressId></addressId> <numberOfCopies></numberOfCopies> <statementFormat></statementFormat> <description></description> <statementConstructDetails> <serviceAgreement></serviceAgreement> <accountNumber></accountNumber> <accountNumberTypeCd></accountNumberTypeCd> <division></division> <statementPrintDescription></statementPrintDescription> <printOrder></printOrder> <startDate></startDate> <endDate></endDate> </statementConstructDetails> <characteristicsList> <characteristicType></characteristicType> <characteristicValue></characteristicValue> <effectiveDate></effectiveDate> </characteristicsList> </personStatementConstructs> </statementConstructsData>

Parent Tag	New Tags
	</statementConstructsData>

Customer 360° View

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

- The **Policy Plan Information** and **Policy Plan Pricing Rules** zones are removed from the **Pricing Information** tab of the **Customer 360° Information** screen. Instead, a new zone named **Fully Insured Pricing Rules** is added to the **Pricing Information** tab. The **Fully Insured Pricing Rules** zone lists the following:
 - Age based and tier based pricing rules defined on the fully-insured policy plans
 - Additional charge pricing rules defined on the parent customer, parent customer's policies and policy plans, bill groups' policies and policy plans, and states.

It appears when you are viewing 360° information of a parent customer or bill group who is associated with the fully-insured policy.

- The **Policy Plan Pricing Rule Summary** zone is renamed to **Pricing Rule Summary**. It lists the following in a tree view:
 - Information string of the parent customer
 - Information string of the pricing rule defined on the parent customer
 - Information string of each fully-insured policy where the parent customer is associated
 - Information string of the pricing rule defined on the fully-insured policy of the parent customer
 - Information string of each plan defined on the fully-insured policy of the parent customer
 - Information string of the pricing rule defined on the fully-insured policy plans

It appears when you are viewing 360° information of a parent customer who is associated with the fully-insured policy.

Health Insurance Policy

The following changes are made to the Health Insurance Policy feature:

- Now, the system enables you to define the following types of membership for a fully-insured group policy:
 - Active Employee Coverage Membership
 - Employer Sponsored Group Medicare Membership (800 Series Plans)
 - COBRA Membership
- Now, you can specify the benefit type for the plan (i.e. whether it is a commercial or medicare affiliated plan). However, there is no validation to ensure that only medicare memberships are defined for the medicare affiliated policy plans.

- Now, you can define and edit proration rules for a plan from the **Plan** screen. For more information about proration rules, refer to the [Premium Proration Rules](#) section.
- Earlier, you were able to specify whether the person is a member or non-member in the membership. But, this information was not considered during premium calculation. Now, this information is used while calculating premium for the Medicare and COBRA memberships. Also, if the **Non-Covered Subscriber Eligible** option is selected in the Age Based pricing rule type, the system will only consider the eligible members and not non-members of the active employee coverage membership during age based premium calculation.
- Earlier, you were able to specify whether the member person is financially responsible for the membership. But, this information was not used during premium billing. Now, when the billing arrangement is set to **Direct Billing** for the Medicare and COBRA memberships, the system will charge the premium directly to the person who is financially responsible for the membership. In such case, the financially responsible person should have an account on which the membership premium can be billed in the system.

Customer Registration

The following changes are made to the Customer Registration feature:

- Now, you can define and edit a statement construct of a person through a customer registration object. Note that you cannot define and edit a statement construct of a person from the **Customer Registration** screen. You can do it only through a health care inbound message.
- While creating a customer registration type using the **C1-CustRegTypeHealthCare** business object, you can specify a statement construct business object. It is used while defining and editing a statement construct through a health care inbound message.
- A new zone named **Statement Construct** is added in the **Main** tab of the **Customer Registration** screen. It lists the statement constructs of the person.

Statement Construct

The following changes are made to the Statement Construct feature:

- The system enables you to define and edit a statement construct of a person through a health care inbound message. However, you can define and edit a statement construct of only those persons which are created through a customer registration object.
- On processing an inbound message with the statement construct details, the system checks whether the statement construct identifier is specified in the inbound message. If so, the system checks whether a statement construct with the specified identifier exists in the system. If so, the system edits the existing statement construct including the person details. However, if the statement construct with the specified identifier does not exist, the system checks whether a statement construct exists for the person. If so, the system edits the existing statement construct of the person. Note that an error occurs when there is more than one statement construct of the person in the system.

However, if a statement construct does not exist for the person, the system creates a new statement construct for the person.

Note: The system defines and edits a statement construct using the statement construct business object specified in the respective customer registration type.

- While creating a statement construct through a health care inbound message, you can specify the list of accounts and contracts whose financial transactions should appear on the statement. Note that you cannot specify a contract which is in the **Canceled** status.
- If the following data is not sent in the health care inbound message, the system uses the statement construct preferences (i.e. default values) defined in the **Field Mapping** screen:
 - Address Source
 - Status
 - Statement Cycle
 - Statement Format
 - Statement Route Type
 - Number of Copies
 - Print Order
- You can also define characteristics for a statement construct through a health care inbound message.
- You can edit and delete the statement constructs which are created through a health care inbound message from the user interface.

Deferred Revenue Recognition

The following changes are made to the Deferred Revenue Recognition feature:

- A new status named **Discarded** is added in the lifecycle of the **C1-DeferredRevenue** business object.
- A new parameter named **Suppress Retro Coverage Period (Y or N)** is added to the **C1-REVRECINP** algorithm type. It is used to indicate whether the deferred revenue recognition schedule should be created for the financial transaction where the coverage end date is earlier than the system date. The valid values are:
 - **Y** – Used to indicate that you do not want to create deferred revenue recognition schedule for the financial transaction where the coverage end date is earlier than the system date. In such case, the status of the deferred revenue recognition is set to **Discarded**.
 - **N** - Used to indicate that you want to create deferred revenue recognition schedule for the financial transaction where the coverage end date is earlier than the system date. This helps to recognize deferred revenue for retro coverage period.

This parameter is not mandatory. If you do not specify the value for this parameter, by default, it is set to **N**.

- Until now, the **C1-REVRECITM** algorithm considered the valid until date and accordingly created the recognition lines within the schedule. Now, the following parameters are added to the **C1-REVRECITM** algorithm type:
 - **Bill Segment Revenue Recognition Date (BSSD, BSED, CVSD, CVED)** – Used to indicate that you want to use either of the following dates and not valid until date for deriving the recognition dates in a deferred revenue recognition which is created for bill segment financial transaction:
 - Bill Segment Start Date (BSSD)
 - Bill Segment End Date (BSED)
 - Financial Transaction Coverage Start Date (CVSD)
 - Financial Transaction Coverage End Date (CVED)

This parameter is used only when the **Override Default Recognition Date (Y or N)** parameter is set to **N** and the recognition schedule in the deferred revenue recognition template is set to **Monthly**. This parameter is not mandatory. If you do not specify the value for this parameter, the system considers the valid until date for deriving the recognition dates in a deferred revenue recognition which is created for bill segment financial transaction.

- **Adjustment Revenue Recognition Date (CVSD, CVED)** - Used to indicate that you want to use either of the following dates and not valid until date for deriving the recognition dates in a deferred revenue recognition which is created for adjustment financial transaction:
 - Financial Transaction Coverage Start Date (CVSD)
 - Financial Transaction Coverage End Date (CVED)

This parameter is used only when the **Override Default Recognition Date (Y or N)** parameter is set to **N** and the recognition schedule in the deferred revenue recognition template is set to **Monthly**. This parameter is not mandatory. If you do not specify the value for this parameter, the system considers the valid until date for deriving the recognition dates in a deferred revenue recognition which is created for adjustment financial transaction.

C1-ASOBLLNG Feature Configuration

The following option types are newly added in the **C1-ASOBLLNG** feature configuration:

- Billing Arrangement
- Bill Cycle Rule Code
- Geographic Rating Area Field Mapping
- TPA Person Relationship Type
- TPA Policy Person Role
- Cobra Billing Arrangement
- Benefit Billing Arrangement

- Relation Structure Code Field Mapping
- TPA Account Relationship Type
- Proration Distributed SQL

Bill Group Derivation

The **C1_MEMBDRV** algorithm is enhanced to derive the billing entity for the COBRA membership:

- If the membership type is **COBRA** and the billing arrangement is **Group Billing**, the bill group derivation process of the COBRA membership is similar to the bill group derivation process of an active employee coverage membership.
- If the membership type is **COBRA** and the billing arrangement is **Direct Billing**, the system derives the account of the member person who is financially responsible for the COBRA membership based on the invoice type priority defined in the respective pricing rule type.
- If the membership type is **COBRA** and the billing arrangement is **TPA Billing**, the system checks whether the bill group has any account where the account relationship type is same as the one specified in the **TPA Account Relationship Type** option type of the **C1-ASOBLNG** feature configuration. If the bill group has such account, the system considers the account for billing the premium and administration fee for the COBRA membership. However, if the bill group does not have such account, the system derives the account of the bill group with a particular invoice type (to which a price item must be billed) based on the priority which is defined for the respective price item in the age based or tier based and additional charge pricing rule types.

In addition, this algorithm is enhanced to derive the billing entity for the Medicare membership:

- If the membership type is **Medicare** and the billing arrangement is **Group Billing**, the bill group derivation process of the Medicare membership is similar to the bill group derivation process of an active employee coverage membership.
- If the membership type is **Medicare** and the billing arrangement is **Direct Billing**, the system derives the account of the member person who is financially responsible for the Medicare membership based on the invoice type priority defined in the respective pricing rule type.

Age Based and Tier Based Pricing Rule Types

The following changes are made to the fully insured pricing rule types:

- A new field named **Primary** appears in the **Main** section while defining the age based and tier based pricing rule types. On selecting the **Primary** option, the **Related Pricing Rule Types** section appears.
- A new field named **Non-Covered Subscriber Eligible** appears in the **Main** section while defining an age based pricing rule type. If you select the **Non-Covered Subscriber Eligible** option, the system will only consider the eligible members and not eligible non-members of the active employee coverage membership during age based premium calculation.
- The system enables you to calculate the premium for the COBRA membership using the age based or tier based pricing rule. You must select the **Primary** option when you want to use the age based and tier based pricing rule types for calculating premium for the COBRA membership. On selecting the **Primary** option, the **Related Pricing Rule Types** section appears. Here, you need to specify the

additional charge pricing rule types using which you want to calculate the administration fee for the COBRA membership. You can use the same age based or tier based pricing rule type for calculating premium for an active employee coverage membership and COBRA membership. In such case, you need to specify the eligibility rule type for the related pricing rule types. This helps the system to determine that the related pricing rule type should be used only when a rule is satisfied. For example, the system will use an additional charge pricing rule type only when the membership type is set to **COBRA**.

- The system enables you to calculate the premium for the Medicare Benefit Part A, Part B, and Part D using the age based or tier based pricing rule. You can use the Medicare plan benefit package and Medicare benefit as the pricing parameters in the age based or tier based pricing rule. The system enables you to restrict the billing of a Medicare benefit by defining a parameter with the source entity as **Algorithm** and source type code as **Get benefit coverage for the given date (C1-PPRAMCOV)**. In the **C1-PPRAMCOV** algorithm, you can specify the following:
 - **Benefit Sub Type** – Used to indicate that the pricing for the Medicare membership should be determined based on the specified value. Here, you can specify the parameter values as **A**, **B**, and/or **D** separated by a comma. For example, if the parameter is set to A, B, the system will derive the base fee where the parameter is set to AB even though the Medicare member person has the Medicare Part D benefit. This is because you have configured the system such that Medicare Part D will not be considered for billing.
- Until now, you used to attach the following algorithms in the age based pricing rule types:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Billable Charge Creation Pre-Processing	C1-FIBCBP
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_AGEPREM
Pricing Rule Pre-Processing	C1_AGEBDELG
Billable Charge Creation Post Processing	C1-FICRETBC

Now, you need to attach the following algorithms in the age based pricing rule types:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Account and Price Item Derivation Post-Processing	C1-BILLPDRV
Account and Price Item Derivation Post-Processing	C1-BILLRPCR
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_AGEPREM
Pricing Rule Pre-Processing	C1_AGEBDELG
Billable Charge Creation Post Processing	C1-FICRETBC

System Event	Algorithm
Pricing Rule Proration Amount Calculation	C1-AGEPRFC
Skip Month Premium Calculation (in case you want to use the 9/10 Billing feature)	C1-SKPMNTHPC

- Until now, you used to attach the following algorithms in the tier based pricing rule types:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Billable Charge Creation Pre-Processing	C1-FIBCBP
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_TIERPREM
Billable Charge Creation Post Processing	C1-FICRETBC

Now, you need to attach the following algorithms in the tier based pricing rule types:

System Event	Algorithm
Account and Price Item Derivation	C1_ACCPRIMEM
Account and Price Item Derivation Post-Processing	C1-BILLPDRV
Account and Price Item Derivation Post-Processing	C1-BILLRPCR
Account and Price Item Derivation Post-Processing	C1-DERSUBTR
Bill Group Derivation	C1_MEMBGDRV
Premium Calculation	C1_TIERPREM
Billable Charge Creation Post Processing	C1-FICRETBC
Pricing Rule Proration Amount Calculation	C1-TIERPRFC
Skip Month Premium Calculation	C1-SKPMNTHPC

Repricing

The following changes are made to the Repricing feature:

- The system enables you to recalculate the COBRA membership premium in the following scenarios:
 - A member is added or removed from the COBRA membership
 - The fields, characteristics, or statuses which are monitored for the auditing purposes are updated at the membership, member person, or pricing rule level
 - Age based or tier based pricing rule is added or updated for a policy plan

- Additional charge pricing rule is added or updated for a policy plan, policy, parent customer, or state
- The derivation and pricing parameters are defined or updated for a bill group
- The entity audit framework is already configured for the **C1-PricingRuleCapitationFee** business object. To enable the entity audit feature for the additional charge pricing rule, you need to create an active audit event type for the **C1-PricingRuleCapitationFee** business object.
- The system enables you to recalculate the Medicare membership premium in the following scenarios:
 - A benefit of a member person is added or edited
 - The fields, characteristics, or statuses which are monitored for the auditing purposes are updated at the membership, member person, benefit, or pricing rule level
 - Age based or tier based pricing rule is added or updated for a policy plan
 - Benefit pricing rule is added or updated for a policy plan
 - The derivation and pricing parameters are defined or updated for a bill group
- The **C1-FIAUDEV** algorithm is enhanced to support the repricing feature for the Medicare memberships.
- Now, the **C1-REPC1** batch invokes the algorithms attached to the following system events:

Pricing Rule Type	System Event	Algorithm
Age Based	Bill Group Derivation	C1_MEMBGDRV
	Account and Price Item Derivation	C1_ACCPRIMEM
	Account and Price Item Derivation Post-Processing	C1-BILLPDRV
	Account and Price Item Derivation Post-Processing	C1-BILLRPCR
Tier Based	Bill Group Derivation	C1_MEMBGDRV
	Account and Price Item Derivation	C1_ACCPRIMEM
	Account and Price Item Derivation Post-Processing	C1-BILLPDRV
	Account and Price Item Derivation Post-Processing	C1-BILLRPCR
	Account and Price Item Derivation Post-Processing	C1-DERSUBTR

- Now, the **C1-REPC2** batch invokes the algorithms attached to the following system events:

Pricing Rule Type	System Event	Algorithm
Age Based	Pricing Rule Pre-Processing	C1_AGEDELG
	Premium Calculation	C1_AGEPREM
	Pricing Rule Proration Amount Calculation	C1-AGEPRFC

Pricing Rule Type	System Event	Algorithm
Tier Based	Premium Calculation	C1_TIERPREM
	Pricing Rule Proration Amount Calculation	C1-TIERPRFC

- A new batch named **C1-REPC3** is introduced in this release. You must execute this batch only when you want to use the 9/10 Billing feature. It should be executed after executing the **C1-REPC2** batch.
- Now, the **C1-FIBCR** batch invokes the algorithms attached to the following system events:

Pricing Rule Type	System Event	Algorithm
Age Based	Billable Charge Creation Post Processing	C1-FICRETBC
Tier Based	Billable Charge Creation Post Processing	C1-FICRETBC

If the **C1-FIBCBP** algorithm is attached to the **Billable Charge Creation Pre-Processing** system event in the age based or tier based pricing rule types, the batch will derive the bill period using the invoice day characteristic of the account. However, if the **C1-FIBCBP** algorithm is not attached to the **Billable Charge Creation Pre-Processing** system event, the batch will derive the bill period from the **RECURRING_VAL** column corresponding to the record in the **CI_REPRC_REQ_DTL** table.

User Interface (UI) Level Changes

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

Screen Name (in 2.9.0.0.0)	Changes
Customer 360° View (for the Healthcare domain)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Skip Months field is added to the 360° Search zone when you search for an account using the advanced search option.
Customer 360° Information (for the Healthcare domain)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Extension column is added to the Phone Details section in the Person Information zone. The Skip Months field is added to the Billing section of the Account Information zone. The View icon corresponding to the plan is removed from the Policy Plans zone. The Benefit Type column is added to the Policy Plans zone. The Pricing tab is renamed to Pricing Information. The Policy Plan Information and Policy Plan Pricing Rules zones are removed from the Pricing Information tab. The Policy Plan Pricing Rule Summary zone is renamed to Pricing Rule Summary. The Fully Insured Pricing Rules zone is added to the Pricing Information tab.
Policy (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Benefit Type column is added to the Plans zone. The Membership Type, Benefits, and Membership ID columns are added to the Memberships zone. The Characteristics section is removed from the Policy zone. Instead, a new zone named Policy Characteristics is added in the Main tab of the Policy screen.
Plan (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Benefit Type field is added to the Main section. The Proration Rules section is added to this screen.
Policy Plan (Used for Viewing)	<p>The following changes are made to this screen:</p>

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> • The Characteristics section is removed from the Policy Plan zone. Instead, a new zone named Plan Characteristics is added to the Policy Plan screen. • The Proration Rules section is added to the Policy Plan zone. • The Membership Type, Benefit, and Membership ID columns are added to the Memberships zone.
Membership (Used for Searching)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Membership Type field is added to the Search Criteria section when you search for a membership using the policy plan, membership, or person details. • The Benefit Type and Benefit Sub Type fields are added to the Search Criteria section when you search for a membership using the membership or person details. • The Membership Type and Benefit columns are added to the Search Results section.
Membership (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Membership Type field is added to the Main section.
Membership (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Policy Information and Membership Type fields are added to the Membership zone in the Main tab. • The Characteristics section is removed from the Membership zone. Instead, a new zone named Membership Characteristics is added to the Main tab. • A new zone named Member Person Characteristics is added to the Main tab. • The Financially Responsible, External Medicare Beneficiary ID, and Date of Birth columns are added to the Member Persons zone in the Main tab. • The Account ID column is added to the Billable Charges zone in the Contracts and Charges tab. • The Proration Factor, Distributed Amount, No. Of Billing, and Total Amount for Contract Period columns are added to the Pricing Calculation Details zone in the Contracts and Charges tab.
Add/Edit Member Person	<p>The following changes are made to this screen:</p>

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> The External Medicare Beneficiary ID field is added to the Main section.
Statement Construct	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> A new field named Statement Construct Identifier is added to the Main tab. The Characteristics tab is added to this screen.
Customer Registration Type	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Statement Construct Business Object field appears in the Additional Data section of the Customer Registration Type zone when you are viewing a customer registration type which is created using the C1-CustRegTypeHealthCare business object.
Customer Registration Type (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Statement Construct Business Object field is added to the Additional Data section when you are defining a customer registration type using the C1-CustRegTypeHealthCare business object.
Customer Registration (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Statement Construct zone is added to the Main tab.
Deferred Revenue Recognition (Used for Searching)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Discarded option is added to the Status list in the Search Deferred Revenue Recognition zone.
Deal Type (Used for Searching)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Product Level Approval Required, To Do Reminder Days, To Do High Priority Days, Deal Monitor To Do Type, and Questionnaire Template fields are added to the Main section in the Deal Type zone. The Product column is added to the Deal Approval Profiles section in the Deal Type zone.
Deal Type (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Product Level Approval Required, To Do Reminder Days, To Do High Priority Days, Deal Monitor To Do Type, and Questionnaire Template fields are added to the Main section. The Product option is added to the Approval Type list in the Deal Approval Profiles section.

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> The Product column is added to the Deal Approval Profiles section.
Terms and Conditions	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> This screen is completely redesigned to enhance user experience.
Mapping Terms and Conditions	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> This screen is completely redesigned to enhance user experience.
Deal Dashboard	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Deal Action/Metrics zone is renamed to Deal Metrics. The Create Deal button is removed from the Deal Metrics zone and added to the Page Title area of this screen. A toggle switch is added to the Deal Metrics zone which helps to switch between tiles chart and bar and line chart. The Period From, Period To, Division, Customer Segment, and Customer Tier fields are added to the Deal Metrics zone. The Deal Statistics zone is added to this screen. Two columns named To Do and Deal Information are added to the Deal To Do zone. The To Do Type, Priority, Start Date, End Date fields are added to the Filter area in the Deal To Do zone. The Deal Creation From Date and Deal Creation To Date fields are added to the Search Deal zone when you search for a deal using the deal, customer, or account details. The Customer Tier field is added to the Search Deal zone when you search for a deal using the customer details. The Person Information column is renamed to Customer Information. The icon used in the View Approval Workflow column has changed. Two new columns named Review Deal and Profitability Details are added to the Search Deal zone. The Profitability Details column appears only when you search for a deal using the deal details.

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> • A check box is added corresponding to the deal in the Search Deal zone. • The Add to Compare link is added above the Search Results section in the Search Deal zone. • The Add to Compare link is added to the Deal Versions zone. • A check box is added corresponding to the deal version in the Deal Versions zone. • The Profitability Details column is added to the Deal Versions zone. • A new zone named Deal Comparison is added to this screen.
Deal Approval Workflow	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Product Approval legend is added to the Approval Workflow Tracker section. • The Action Date Time column is removed from the Approval History section. • The Product, Create Date Time, and Update Date Time columns are added to the Approval History section.
Price Item (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Spread Amount and Spread Percentage options are added to the Average Price Floor and Ceil Limits list in the Main section. • The Negotiability column is added to the Divisions section. On clicking the icon in the Negotiability column, two grids appear – one grid appears with the Negotiability Switch and Only Within Range columns and another grid appears with the Negotiability Floor Value, Negotiability Ceil Value, and Currency columns. • If the average price floor and ceil limits is set to Spread Amount, a grid appears with the To Do Role, Spread Amount, Floor and Ceil Currency columns in the Divisions section when you click the icon in the Floor and Ceiling Type column corresponding to a division. • If the average price floor and ceil limits is set to Spread Percentage, a grid appears with the To Do Role and Spread Percent columns in the Divisions section when you click the icon in the Floor and Ceiling Type column corresponding to a division.

Screen Name (in 2.9.0.0.0)	Changes
Price Item (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Division-Specific Negotiability for Price Item zone is added to this screen. It appears when you click the Broadcast icon corresponding to a division in the Divisions zone. • The columns that appear in the Division-Specific Floor and Ceil Values for Price Item zone change depending on the value specified for the Average Price Floor and Ceil Limits field.
Price Item Pricing (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Deal Information, Division-Specific Floor and Ceil Values for Price Item, Division-Specific Negotiability for Price Item, Division-Specific SQIs for Price Item, and Division-Specific Cost for Price Item sections are added to the Price Item Pricing zone.
Price Item Pricing (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Deal Information and Commitments sections are added to this screen. • A grid appears with the Cost Type and Cost Value columns on clicking the icon in the Costs column of the Commitments section. • A grid appears on clicking the icon in the Floor and Ceiling Type column of the Commitments section. The columns that appear in this grid change depending on the value specified for the Average Price Floor and Ceil Limits field. • A grid appears with the Negotiability Floor Value and Negotiability Ceil Value columns on clicking the icon in the Negotiability column of the Commitments section.
Price List (Used for Searching)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Price Item Pricing zone is added to this screen. It appears when you click the Broadcast icon corresponding to the price item in the Price List Price Items zone.
Price List (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Available For Deal Pricing and Standard For Deal Pricing fields are added to the Main section of the Price List zone.
Price List (Used for Adding and Editing)	<p>The following changes are made to this screen:</p>

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> The Available For Deal Pricing and Standard For Deal Pricing fields are added to the Main section of this screen.
Pricing and Commitments	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Deal Version section is removed from this screen. Instead, the Person Information or Account Information field appears The Pass Through Charge Information and Product Financial Summary sections are added to this screen. The Recommended and Approver-Recommended legends are added to this screen. The Status and Approver columns are added to the Pricing and Commitments section.
Deal Pricing	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> This screen is completely redesigned to enhance user experience.
Deal Information	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Template Deal and Skip Questionnaire fields are added in the Main section of the Deal zone. The Product section is added to the Deal zone. The Questionnaire page is added to this screen. The Reference Deals option is added to the Search By list in the Select Reference zone of the Reference page. The Deal Version Status column is added to the Search Results section of the Select Reference zone. The Usage Period and Deal Frequency fields are added to the Deal Information zone. The Product Financial Summary section is added to the Simulation Details zone of the Pricing/Commitments page.
Deal Approver Dashboard	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Deal Metrics zone is added to this screen. Two columns named To Do and Deal Information are added to the Deal To Do zone. The To Do Type, Priority, Start Date, End Date fields are added to the Filter area in the Deal To Do zone.

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> • The Deal Approver View zone is renamed to Search Deal. • The Deal Creation From Date and Deal Creation To Date fields are added to the Search Deal zone when you search for a deal using the deal, customer, or account details. • The Pending for Review option is added to the Status list in the Search Deal zone.
State	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Pricing Rules List zone is added to this screen. It appears when you click the Broadcast icon corresponding to a state in the Search State zone.
Pricing Rule Type	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Primary and Non-Covered Subscriber Eligible fields are added to the Pricing Rule Type zone when you view the details of an age-based, tier based, or additional charge pricing rule type. • The Related Pricing Rule Types section is added to the Pricing Rule Type zone when you view the details of an age-based or tier based pricing rule type.
Fully Insured Age Based Pricing Rule Type, Fully Insured Tier Based Pricing Rule Type, and Fully Insured Capitation Fee Pricing Rule Type	<p>The following changes are made to these screens:</p> <ul style="list-style-type: none"> • The Primary and Non-Covered Subscriber Eligible fields are added to the Main section. • The Related Pricing Rule Types section appears when you select the Primary option.
Parameter (Used for Searching)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Benefit option is added to the Source Entity list of the Search Parameter zone.
Parameter (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Benefit option is added to the Source Entity list. • The Rule Eligibility Criteria field is added in the Parameter Usage section.
Rule Type (Used for Adding and Editing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> • The Rule Type Category field is added to the Main section. It appears when you set the rule type usage to Price Item Eligibility or Related Pricing Rule Type Eligibility.

Screen Name (in 2.9.0.0.0)	Changes
	<ul style="list-style-type: none"> The Parameter column appears in the Input and Output Parameters section when you set the rule type category to Parameter Based.
Rule Type (Used for Viewing)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Rule Type Category field appears in the Main section when the rule type usage is set to Price Item Eligibility or Related Pricing Rule Type Eligibility. The Parameter column appears in the Input and Output Parameters section when the rule type category is set to Parameter Based.
Add/Edit/Copy Rule	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Rule Output Parameters section does not appear when you define a parameter based rule. In the Criteria section, the Parameter Name is a field and not a list when you define a parameter based rule. The Field option does not appear in the Parameter Value list when you define a parameter based rule. Instead, the Parameter and Value options appear in the Parameter Value list.
Audit Event Type (Used for Adding)	<p>The following changes are made to this screen:</p> <ul style="list-style-type: none"> The Disaggregation/Reseeding option is added to the Audit Usage list in this screen.

Database Level Changes

To view the list of objects (such as tables, columns, algorithm types, business objects, and so on) which are newly added in Oracle Revenue Management and Billing Version 2.9.0.1.0, refer to the Appendix A : New Objects in the Oracle Revenue Management and Billing V2.9.0.1.0 Database in *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 2.9.0.1.0 is supported:

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database Server
Windows 10 (64-bit) with Microsoft Edge (Chromium) v83, Firefox ESR 68.x ¹ , or Google Chrome Enterprise Version 81 or higher	AIX 7.2 TLO+ ² (64-bit)	POWER 64-bit	WebLogic 12.2.1.3 (64-bit) WebLogic 12.2.1.4 (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
	Oracle Linux 7.x (64-bit)	x86_64	WebLogic 12.2.1.3 (64-bit) WebLogic 12.2.1.4 (64-bit) IBM WebSphere 9.0.5.2	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
	Oracle Solaris 11.3+	SPARC 64-bit	WebLogic 12.2.1.3 (64-bit) WebLogic 12.2.1.4 (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
	Red Hat Enterprise Linux ³ 7.x (64-bit)	x86_64	WebLogic 12.2.1.3 (64-bit) WebLogic 12.2.1.4 (64-bit) IBM WebSphere 9.0.5.2	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
Windows Server 2012 R2 (64-bit)	x86_64	WebLogic 12.2.1.3 (64-bit) WebLogic 12.2.1.4 (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c	

¹ Here, x represents the vendor supported version.

² Version numbers suffixed with "+" are the MINIMUM version supported. That version and all future 4th digit updates will be supported.

³ Oracle Revenue Management and Billing is tested and certified on Oracle Linux 7.x. Oracle Linux is 100% userspace-compatible with Red Hat Enterprise Linux, and therefore Oracle Revenue Management and Billing is supported on Red Hat Enterprise Linux.

Note: We strongly recommend you to install Oracle Revenue Management and Billing (ORMB) on Windows platform only for non-production activities, such as User Acceptance Testing (UAT), development setup, and so on.

Oracle Utilities Application Framework 4.4.0.2.0 Enhancements

The following enhancements are made in Oracle Utilities Application Framework Version 4.4.0.2.0:

- [Web Services Enhancements](#)
- [Implementation Tool Enhancements](#)
- [Accessibility Enhancements](#)
- [Miscellaneous Enhancements](#)

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

Web Services Enhancements

The following enhancements are made to the Web Services feature:

- [XSLT Storage in the Database for SOAP Services](#)
- [REST Web Service URL Update](#)
- [REST Web Services Support Parameters and Additional HTTP Methods](#)

XSLT Storage in the Database for SOAP Services

In previous releases, you had to store eXtensible Stylesheet Language Transformations (XSLTs) files in the file system. The system now supports creating a Managed Content record for any XSLT that you can reference on a SOAP Inbound Web Service (IWS) or External System/Outbound Message Profile record.

Your decision to use Managed Content as the storage mechanism rather than the file system is a system-wide decision. The product does not support some records referring to XSLTs in the file system and managed content. You can control this setting using a Feature Configuration option on the "External Messages" feature type. If you do not define an option, the default value is that the XSLT will be stored in managed content. For new installations, we recommend storing the XSLT records as managed content.

For backward compatibility, you can use an upgrade script to add the XSL Location feature type and set the value to F1FL (file system). If desired, you can see the steps to enable below for information about adopting the new feature.

Be aware that other locations where XSLTs are defined do not support XSL in the database. This includes XAI Inbound Service and any internal functionality, such as zone type configuration, that uses XSLT. Also, be aware that the business service that supports sending a real-time email supports providing XSLT names as part of the payload. This functionality does not support a XSLT defined in managed content.

Steps to Enable

By default, the system-wide configuration for upgrading clients is set to indicate that XSLTs used for SOAP IWS records and outbound messages are defined in the file system for backward compatibility. In order to support defining these XSLTs as a Managed Content record instead, you should perform the following steps:

1. Create a Manage Content record for each unique XSLT. If the existing file is 30 characters or less, set the Managed Content code to the same name as the existing file name.
2. Locate the feature configuration record for the "External Messages" feature type and find for the XSLT Location option.
3. Change the value to F1MC from F1FL, or you can simply remove the option as F1MC is the default. Since this setting is cached, be sure you flush the cache.
4. For each SOAP IWS record or external system or outbound message profile record that references an XSLT, confirm the name. Make any necessary changes to the referenced XSLT to ensure that it is referencing a valid Managed Content recorded for SOAP IWS records and outbound messages are defined in the file system for backward compatibility.

REST Web Service URL Update

The published API for REST services was updated to the following URL format:

`.../rest/apis/{ownerURIComponent}/{resourceCategoryURIComponent}/{iwsURIComponent}/{iwsOperationURIComponent}`

The information preceding `/rest/` is needed to reference the environment. This part of the URL configuration has not changed and will continue to work like previous releases.

The following provides more information about where the various components:

- **Owner URI Component:** Configured using a new extendable lookup. Each owner flag will define its URI Component and the URL will be built using the URI Component for the owner of the REST IWS.
- **Resource Category URI Component:** A new element on the Resource Category extendable lookup. The product delivered resource categories are updated with appropriate values. For any custom Resource Categories, an upgrade script will populate the new URI Component using the extendable lookup value preceded by a slash. You should review these records and make any desired updates to the value.
- **IWS URI Component:** A new element on the REST IWS record. The product delivered IWS records are updated with appropriate values. For any custom REST IWS records, an upgrade script will populate the new URI Component using the Web Service code preceded by a slash. You should review these records and make any desired updates to the value.

The system will continue to support the REST URL format from previous releases. However, we plan to deprecate that code in a future release. You should plan to review any external REST calls and adjust them to follow the new pattern.

Steps to Enable

No steps are required to enable this feature.

REST Web Services Support Parameters and Additional HTTP Methods

The REST IWS was enhanced to support additional HTTP methods along with path and query parameters. On the IWS operation, the methods GET, PUT and PATCH are now supported. This is in addition to existing support for POST.

The actual actions and functionality that are triggered by a given REST service call are still controlled by the business object, business service, or service script that is configured on the operation. For example, if you configure an operation with the HTTP method of PUT and you reference a service script that is simply reading a record, the system will perform the action of the service script and read the record. The HTTP methods are meant as external documentation.

In addition to supporting additional HTTP methods, the system also supports designing path or query parameters. When using the HTTP Method of GET, PUT or PATCH, a new child collection for IWS Operation is available for the REST IWS record. The collection is a mapping from the schema element XPath to the text that you want used for that parameter in the URL. In addition, for each parameter, you indicate whether it is a path or query parameter:

- **Path Parameters:** Parameters that are part of the endpoint and required. The Operation's URI component must declare each path parameter surrounded by curly braces. The API for the Inbound REST Web Service will include this notation so that REST callers will know what needs to be provided.
- **Query Parameters:** Optional. Parameters that are not part of the endpoint. They are included in the endpoint URL after a question mark and followed by name-value pairs.

Steps to Enable

No steps are required to enable this feature.

Implementation Tool Enhancements

The following tools are enhanced in Oracle Utilities Application Framework Version 4.4.0.2.0:

- [Data Conversion Tools](#)
- [Oracle JavaScript Extension Toolkit \(OJET\)](#)

Data Conversion Tools

You can use the following new template batch programs to convert data for enabled maintenance objects:

- **Validation (F1-CVVAL):** Validates the schema and business rules associated with a maintenance object.
- **Key Assignment (F1-CVASG):** When the primary key is system generated, generates new keys for legacy keys for a table.
- **XML Resolution (F1-CVXML):** Resolves converted foreign key references in XML storage fields.
- **Insert to Production (F1-CVINS):** Inserts data to production while resolving legacy keys across physical fields and XML storage fields.
- **Copy to Staging (F1-CVCTS):** Allows you to copy data from production back to staging in order to resolve unique conversion situations that may arise when multiple products are installed.

Steps to Enable

No steps are required to enable this feature.

Key Resources

You can refer to your product's online help for more information about the conversion process. You can refer to your product-specific documentation for more information on the specific maintenance objects enabled for conversion.

Oracle JavaScript Extension Toolkit (OJET)

Oracle JavaScript Extension Toolkit (OJET) was upgraded to accommodate security fixes within JQuery.

Steps to Enable

No steps are required to enable this feature.

Tips and Consideration

The new version of OJET also incorporated newer releases of other included libraries. Knockout, one of these new releases, is used for data binding. Knockout uses a JavaScript function to enable this binding, which resembles the following:

```
ko.applyBindings(viewModel, document.body);
```

With the previous OJET and Knockout releases, the `applyBindings` function only required the `view/model` parameter. The second parameter, the DOM object, was optional. With the new release, the second parameter is now required. If you have code that omitted this parameter, you will need to add it. If you do not provide it, a message will appear on the console log informing you of the situation. Be aware that while "document.body" is an acceptable parameter, performance may be enhanced if you can provide a smaller portion of the document. For example:

```
ko.applyBindings(viewModel,  
document.getElementById('bindContainer'));
```

With the previous release of OJET v3.2, the elements were included on the page by use of the `data-bind` format. For example:

```
<div id="barChart" data-bind="ojComponent: { component: 'ojChart',  
  type: 'bar',  
  orientation: orientationValue,  
  stack: stackValue,  
  series: barSeriesValue,  
  groups: barGroupsValue,  
  hoverBehavior: 'dim' }">  
</div>
```

This format of definition is still supported by the current OJET v7.1 release. However, a new format of definition called Web Component is available in this release. For example:

```
<oj-chart id="areaChart" type="bar" orientation="[[orientationValue]]"
stack="[[stackValue]]" data="[[dataProvider]]">
  <template slot="itemTemplate" data-obj-as="item">
    <oj-chart-item value="[[item.data.value]]" group-id="[[
      [item.data.quarter] ]]" series-id="[[item.data.series]]"></
    oj-chart-item>
  </template>
</oj-chart>
```

While the structure appears to be different, the actual functionality and parameter usage are almost identical to the "data-bind" format. Since it provides more functionality (if needed) and performance changes to make rendering faster, we recommend using the Web Component format instead of the data-bind format.

Be aware that OJET v8.0 and later will no longer support the deprecated "data-bind" format. Therefore, updating any OJET code now will provide you with immediate benefits as well as reduce or remove future implementation issues. Details and examples of the Web Component format are provided on the website listed below.

Key Resources

You can refer to the OJET site at <https://www.oracle.com/webfolder/technetwork/jet/index.html>.

Accessibility Enhancements

The following accessibility enhancements are made in Oracle Utilities Application Framework Version 4.4.0.2.0:

- [Alternate Row Header on Data Explorers](#)
- [Alternate Red Text Color Option](#)

Alternate Row Header on Data Explorers

For accessibility, every table in the system should define its row header as the data that uniquely identifies the row. In previous releases, for data explorer results, the first column in the results was automatically designated as the row header. There was no ability for you to designate a different column or multiple columns as the row header. In this release, a new zone column mnemonic has been introduced: rowheader=true. You can use this when designing a data explorer zone if the first column in the results does not uniquely define the row.

Steps to Enable

If you have accessible users and custom zones where the first column does not uniquely define the row, you should consider updating the zone columns to indicate the column(s) that uniquely identify the row.

Alternate Red Text Color Option

There are places in the products where the color red is used for emphasis. The standard red color supported in HTML does not satisfy the accessibility requirement for color contrast minimum when the background is white.

Instead of using `color=red` or `#FF0000` (the RGB color model combination for "red"), we recommend you use the following red shade on a white background: `color=#E0292F`.

In addition, we provide a new Cascading Style Sheet (CSS) class so that you do not have to remember the code to implement this change. You can use the class `textColorRedOnWhite`. You can use this UI maps, zone help text, and scripting. For data explorer columns, reference the RGB code.

Steps to Enable

No steps are required to enable this feature.

Tips and Considerations

If implementations are coding their own user interface components and plan to use the color red, we recommend implementing the alternate red color to accommodate any accessible users that may be impacted.

Key Resources

You can reference the new "Accessibility Considerations" section in the Configuration Tools chapter of the online help.

Miscellaneous Enhancements

The following additional enhancements are made in Oracle Utilities Application Framework Version 4.4.0.2.0:

- [Date and Time Extracted in XSD Format](#)
- [Market Transaction Management Environment Initialization](#)
- [Configuration Updates on ILM-Enabled Maintenance Objects](#)
- [Batch Thread Error Handling Enhancement](#)

Date and Time Extracted in XSD Format

By default, date and time fields are retrieved and extracted in an internal "OUA" format. In this release, various changes were implemented to support indicating that all date and time fields should be converted to standard XSD format:

- The plug-in driven extract batch program supplied by the product was enhanced to include a new parameter to indicate the date format.
- The `F1-ConvertXMLToDelimited` and `F1-ConvertXMLToFileFormat` business services were enhanced to include a new parameter to indicate the date format. By default, date and time fields are retrieved and extracted in an internal "OUAF" format. In this release, various changes were

implemented to support indicating that all date and time fields should be converted to standard XSD format.

- The plug-in driven extract batch program supplied by the product was enhanced to include a new parameter to indicate the date format.

Steps to Enable

No steps are required to enable this feature.

Market Transaction Management Environment Initialization

If you plan to import market transaction management accelerator metadata, you are required as an initial step to include a new entry in the Installed Products database for the "utility markets" owner flag.

Steps To Enable

You need to submit the F1-IPUM background process. This process has its own F1-IPUM application service that you need to configure for the appropriate user group.

Configuration Updates on ILM-Enabled Maintenance Objects

We added a missing eligibility algorithm and an ILM crawler batch control to the ILMEnabled Process Flow (F1-PROSTR) and Statistics Snapshot (F1-STSSNPSHT) maintenance objects. As per the recommended settings, several maintenance objects that are ILM enabled and are configured with the base ILM Eligibility algorithm by status were updated to configure maintenance object options related to status.

Steps To Enable

Make the feature accessible by assigning or updating privileges and/or job roles. Details are provided in the Role section below.

Tips and Considerations

If any of the settings do not align with your implementation's business rules, you should take steps to adjust the options.

Role Information

The two new ILM crawler batch jobs include new application services: F1-SSCRL and F1-PFCR. Security administrators should add these application services to any user group that is authorized to run the ILM crawler batch controls.

Batch Thread Error Handling Enhancement

Batch jobs may fail because of technical or environmental reasons that are transient in nature, such as an interruption in the availability of the database. With the previous batch implementation, temporary failures would result in the batch thread being marked in Error status and a customer alert. Since these issues cannot always be resolved, batch processing now supports automatic thread resubmission when a failure occurs for technical reasons. The thread will now move to a status of "Interrupted" and the system will attempt a number of retries before moving the thread to "Error."

Steps To Enable

No steps are required to enable this feature.

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 2.9.0.0.0 to 2.9.0.1.0. For more information on how to upgrade, refer to the following documents which are available on OTN:

- Oracle Revenue Management and Billing Version 2.9.0.1.0 Upgrade Guide
- Oracle Revenue Management and Billing Version 2.9.0.1.0 Upgrade Path Guide

For upgrading from any other version of Oracle Revenue Management and Billing other than 2.9.0.1.0, consult with Oracle Support, Oracle Partner, or Oracle Consulting that may be supporting your implementation and upgrade process.

Unsupported Integrations

We are not supporting Oracle Documaker Integration with ORMB 2.9.0.1.0. 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:

- Reporting User Guide
- Reporting Installation Guide
- Bill and Letter Reports Configuration Guide
- Reporting SDK Guide

Deprecation Notices for OUAF Version 4.4.0.2.0

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:

- [Deprecated Functionality in This Release](#)
- [Deprecation Planned for Future Releases](#)

Deprecated Functionality in This Release

None

Deprecation Planned for Future Releases

The following features and system data will be removed in the future release of Oracle Utilities Application Framework:

- [Application Viewer](#)
- [REST IWS - Original REST Servlet](#)
- [Maintenance BPA Change Warnings to Popup](#)
- [Append Setting In Pagination](#)
- [Support for Master/Subordinate Services for Web Services Catalog](#)
- [Selected Functionality of the Batch Run Statistics Portal](#)
- [Miscellaneous System Data](#)
- [CMA Migration Requests](#)
- [CMA Import Algorithm](#)
- [Business Object Read in F1-MainProc When Pre-Processing Exists](#)

Application Viewer

In the future release, we plan to no longer support a standalone application viewer. The functionality will be incorporated into the application:

- Similar to the data dictionary, we will enhance user interfaces for tables and fields to provide more information at a glance and provide a view of links between tables.
- Information displayed for maintenance objects, batch controls and algorithm types and algorithms are already visible in the application.
- Javadocs and Groovy Javadocs will be viewable from within the application rather than launching a separate application viewer application.

REST IWS - Original REST Servlet

The original URL supplied for invoking IWS-based REST services included the IWS Service name in its makeup. We continue to support this for backward compatibility purposes, but we will deprecate it in a

future release. As defined in the documentation, you should adjust your existing integrations to use the currently supported URL.

Maintenance BPA Change Warnings to Popup

Currently, the common maintenance BPA used by most of the system displays warnings as errors. This erroneously allows you to make changes to the record before clicking OK. In this situation, the warning conditions will not be checked again for the new changes.

We plan on changing this in the future to show warnings as pop-ups. You will be able to click OK to accept the warning without being able to make any changes. You can click Cancel to adjust the form and resubmit, which will check the warning conditions again.

Append Setting In Pagination

There are several known issues with the functionality of the 'append' option in pagination such that it is not recommended to use this pagination setting. This functionality will be deprecated in a future release.

Support for Master/Subordinate Services for Web Services Catalog

The Service Catalog Configuration (master configuration) supports defining subordinate servers. This functionality is no longer applicable for the Oracle Integration Cloud and will be removed in a future release.

Selected Functionality of the Batch Run Statistics Portal

The **Batch Run Statistics** portal provides some additional information about batch runs. However, some of the functionality provided on this page is related to capturing additional information from an external tool. This information is stored in a Fact record.

The functionality related to capturing additional information will no longer be supported in a future release. This information will still be available to existing clients, but the functionality will no longer be maintained.

Miscellaneous System Data

- Environment Reference - This administrative maintenance object was related to ConfigLab and Archiving, which are no longer supported. In a future release, the following will be removed:
 - Migration Plan F1-EnvironmentRef. Note that no base migration request references this plan. Implementations should ensure that no custom migration request references this plan.
 - F1-EnvironmentRefPhysicalBO business object
 - ENV REF maintenance object
- The To Do Type F1-SYNRQ (Sync Request Error) is not in use and will be deleted in a future release. Errors for the Sync Request Monitor (that also has the name F1-SYNRQ) are reported using the To Do Type F1-SYNTD (Sync Request Monitor Errors).
- The following metadata related to the legacy LDAP import pages will be removed in a future release: Services CILTDIP, CILTDIL, CILTLDIS, Application Service: CILTDIP

- The following algorithm types and algorithms provided for the current LDAP import functionality do not include any logic. They will be removed in a future release.
 - Algorithm Type/Algorithm F1-LDAPIMPRT
 - Algorithm Type/Algorithm F1-LDAPPREPR
- The lookup value CHAR_ENTITY_FLG / F1SE (Characteristic Entity / Sync Request Inbound Exception) is not in use and will be removed in a future release.
- The zone F1-MGRREQDSP will be removed in a future release.

CMA Migration Requests

The migration requests F1-FrameworkAdmin (Framework Admin) and F1-SchemaAdmin (Schema Admin) are no longer recommended and are not going to be updated with new administration / control tables in future releases. The product may deprecate them in a future release.

CMA Import Algorithm

In a future release, the CMA Import algorithm plug-in spot will be deprecated. As an alternative, review any existing algorithms and create appropriate Pre-Compare algorithms.

Business Object Read in F1-MainProc When Pre-Processing Exists

In the original implementation of configuration tools, if a pre-processing script was linked to the business object via options, the main framework maintenance BPA (F1- MainProc) would not perform a Read of the business object (leaving it to the responsibility of the pre-processing script).

In a subsequent release, to solve a UI Hints issue related to child business objects, a business object Read was included in F1-MainProc even if a pre-processing script existed. This solution introduced a problem only visible for specific scenarios and a different fix has been introduced. In the meantime, the business object Read is no longer necessary in F1-MainProc. Since there are many pre-processing scripts that are properly performing the Read of the business object, ideally the business object 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 business object Read was included in F1-MainProc that were coded to not perform a business object read in the pre-processing script. Due to this situation, the business object Read is still performed as part of the processing of F1-MainProc.

The product plans to remove the business object Read from F1-MainProc logic when a pre-processing script exists. Review your custom pre-processing scripts that are linked to your business object options to ensure that it properly performs a Read of your business object.

Deprecation Notices for ORMB Version 2.9.0.1.0

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:

- [Deprecated Functionality in This Release](#)
- [Deprecation Planned for Future Releases](#)

Deprecated Functionality in This Release

The following features are deprecated in Oracle Revenue Management and Billing Version 2.9.0.1.0:

- **TOU (Variance Parameter) Based Pricing** – We recommend you to use the multi parameter based pricing feature instead of the TOU based pricing feature.
- **Billable Charge Creation Using UOM** – We recommend you to create pass through or service quantity based billable charges using price item.
- **Legacy mechanism to upload pass through billable charges using the BCU1 and BCU2 batches** - We recommend you to use the On Demand Billing feature for uploading pass through and rate based billable charges.
- **XAI Inbound Services** - This is superseded by the Inbound Web Services functionality. For more information on migrating from XAI to IWS, refer to *Migrating from XAI to IWS Oracle Utilities Application Framework (Doc ID: 1644914.1)* on [My Oracle Support](#).
- **Accrual Based on TFM Data** – We have deprecated the **Transaction Feed** accrual source and you will not be able to create accrual based on TFM data. Therefore, we recommend you to create accruals either based on actual trial bill or historical data.

Deprecation Planned for Future Releases

The following features and system data will be deprecated in the future release of Oracle Revenue Management and Billing:

- **Inbound Messages** – The following inbound messages for the fully insured and administrative services only (ASO) business will not be supported from the next release:
 - Customer Inbound Message
 - Membership Inbound Message
 - ASO Customer Inbound Message

We recommend you to use the Healthcare Inbound Message instead of the above mentioned inbound messages. This is because, henceforth, all entities such as person, account, policy, and policy plan should be created through a customer registration object.

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

Object Type	Object Name				
Algorithm Type	C1_CURALG, C1-MDOV-BILL, C1-MDOV-BSEG, C1-MDOV-ONSA, SA_DERV_POPC				
Feature Configuration	C1_EX_ROUND				
Option Types	Currency Conversion Algorithm and Payment Distribution To-Do (from the C1_MLTCURACC feature configuration)				
Table Columns	<p>The following table lists the columns which will be deprecated in the next release:</p> <table border="1"> <thead> <tr> <th>Table Name</th> <th>Column Name</th> </tr> </thead> <tbody> <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> </tbody> </table>	Table Name	Column Name	CI_ACCT_PER	BILL_RTE_TYPE_CD, RECEIVE_COPY_SW, BILL_FORMAT_FLG, NBR_BILL_COPIES, CUST_PO_ID, NOTIFY_SW, and BILL_ADDR_SRCE_FLG
Table Name	Column Name				
CI_ACCT_PER	BILL_RTE_TYPE_CD, RECEIVE_COPY_SW, BILL_FORMAT_FLG, NBR_BILL_COPIES, CUST_PO_ID, NOTIFY_SW, and BILL_ADDR_SRCE_FLG				
Batch Control	GLASSIGN, C1-IAENT, C1-DARSU				
View	CI_EFF_ACCT_PRICING_VW, CI_EFF_PER_PRICING_VW				
Business Service	<p>C1-EffectivePricing, C1_PriceParmBS</p> <p>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.</p>				
Service Program	EFFPRCSERVICE, C1_PRICEPARM				

Object Type	Object Name
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, MDT, MDT Type, Variance Parameter

Therefore, henceforth, 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). You can download Oracle Revenue Management and Billing release-specific documentation library (for example, Oracle Revenue Management and Billing Version 2.9.X.X.X Documentation Library) using the following URL:

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

Media Pack Download

Oracle Financial Services Revenue Management and Billing Version 2.9.0.1.0 and Oracle Insurance Revenue Management and Billing Version 2.9.0.1.0 media packs can be installed on the following supported platforms:

- AIX (64-bit)
- Microsoft Windows (64-bit)
- Linux (64-bit)
- Oracle Solaris (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 2.9.0.1.0 Quick Installation Guide*.

To download a package from a media pack:

1. Login to [Oracle Software Delivery Cloud](#).
2. Select the **Release** option from the **All Categories** list.
3. Type **Oracle Financial Services Revenue Management and Billing** or **Oracle Insurance Revenue Management and Billing** in the corresponding text box.
4. Click **Search**. A list of media packs appears in the search results.
5. Click **Add to Cart** corresponding to the **Oracle Financial Services Revenue Management and Billing 2.9.0.1.0** or **Oracle Insurance Revenue Management and Billing 2.9.0.1.0** option.
6. If required, you can verify the media pack which is added to the cart by clicking the **View Cart** link.
7. Click the **Checkout** link. A page appears.
8. Select the required platform from the **Platforms/Languages** list.
9. Click **Continue**. A page appears with the license agreement.
10. Scroll and read the full license agreement and then click the **I reviewed and accept the Oracle License Agreement** option.
11. Click **Continue**. The **File Download** page appears.
12. Select the required package that you want to download from the media pack and then click **Download**. The **View Downloads** window appears.
13. Select the **Save as** option from the **Save** list corresponding to the download you want to save. The **Save As** dialog box appears.
14. Browse to the location where you want to download the package and then click **Save**. The package is 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
32093516	32021595	ISSUES WITH USAGE DATA FILE UPLOADED VIA USAGE DATA PROCESSING SCREEN
32050594	32014267	WESTPAC_DM: "CANCEL" BUTTON ON DEAL FINALIZE & APPLY BACK SUCCESS MESSAGES
32050044	31905856	WESTPAC_DM: UNRESPONSIVE UI UNDER "PRICING/COMMITMENTS" SECTION WHILE CREATING A NEW DEAL
31984051	31256690	ACCOUNT FINANCIAL HISTORY UI SHOWING INDIVIDUAL AMOUNT OF FT ON SAME CONTRACT ON THE ACCOUNT
31983921	31734973	ORMB V2.9 UPGRADE - PAYMENT UPLOAD GIVING "TRANSACTION TIMED OUT" ERROR
31983883	31886534	PAYMENT FILE REUPLOAD WITH SAME NAME IS FAILING IN RMB 2900
31983832	31876143	ORMB2900 TRANSACTION DETAILS NOT LOADING
31983793	31897204	PAYMENT UPLOAD ZONE DOESN'T GIVE THE DESCRIPTION OF THE ERROR REASON FOR THE INVALID RECORDS.
31983786	31132314	C1-TXNVP BATCH LONG RUNNING
31982774	-	PHONE NUMBER EXTENSION TO BE SHOWN ON CUSTOMER 360 SCREEN
31947517	31692371	RV-PP-PR-IC AND RV-PP-PR-IN ALGORITHM ARE NOT GIVING SUM OF POST PROCESSING CHARGES.
31942220	31751557	ZONE C1-RFBILLITM - QUERY TIMING OUT IN PRODUCT
31913180	31663433	ORMB V2.9 UPGRADE - NOT ABLE TO MODIFY RATES IN PRICELIST ASSIGNMENT
31912763	31233007	UNABLE TO EDIT CHARACTERISTIC VALUE FROM ODB UI HAVING LENGTH AS MORE THAN 16 CHARACTERS.
31893676	31656338	GETTING SYSTEM ERROR WHILE SUBMITTING THE OFFSET REQUEST IN ORMB
31879822	31813878	ORMB 2.9 USER INTERFACE: EFFECTIVE PRICING
31762000	31395799	PAYMENT REQUEST SEARCH NOT WORKING FOR PAYMENT LEVEL TRANSFERS
31754445	31432435	ADJUSTMENT AMOUNT FIELD IS ENABLED EVEN AFTER ADJUSTMENT IS APPROVED
31692245	31508686	WHEN ACCOUNT CLOSING DATE IS UPDATED TO NULL, CONTRACTS FOR THAT ACCOUNT ARE NOT UPDATED TO ACTIVE
31660124	31446543	MASS ADJUSTMENT UPLOAD WITH APPROVAL FEATURE(FORWARD PORT)

Bug Number	Copy of (Base Bug)	Description
31618523	31618512	INCONSISTENT BEHAVIOR WITH DISAGGREGATION BATCHES
31618503	31618496	FILE UPLOAD DASHBOARD BROADCAST ICON SHOWS A SERVER ERROR
31612435	27612737	C1-BLGEN: DELAY IN THREADS STARTING
31395395	31222212	ENTITY IS NOT GETTING UPDATED IN CUSTOMER REGISTRATION(FORWARD PORT)
31345447	-	ENTITY INFORMATION IS NOT DISPLAYED IN THE UPLOAD REQUEST SCREEN
31340801	31335694	BILL SEGMENT CANCELLED FOR THE PRICEITEM WHICH ARE NOT CHANGED AS PART OF PRICING RULE
31326053	31325961	PRICING RULE APPROVAL WORKFLOW POTENTIAL ISSUE WHILE CUSTOMER REGISTRATION APPROVE ACTION
31253803	30703771	TRIAL BILL SEGMENT BATCH GETTING STUCK WHEN EXCHANGE CURRENCY IS NOT AVAILABLE
31217861	31044515	CUSTOMER REGISTRATION UI IS ALLOWING INVALID CHARACTERISTIC VALUE TO BE SAVED.
31183669	31083604	APPROVAL WORKFLOW - PENDING STATUS DISPLAYED TWICE DURING WITHDRAW(FORWARD PORT)
31130953	31130938	FUTURE DATED BILLABLE CHARGES GETTING BILLED.
31128716	31123649	IN CASE OF TIER BASED PRICING RULE, UI IS NOT LOADED PROPERLY
31126461	31069208	UOM DESCRIPTION IS NOT UPDATED WHEN PRICE ITEM DESCRIPTION IS UPDATED(FORWARD PORT)
31016725	30894892	DUPLICATE ROWS RETURNED FOR PERSON ID SEARCH IN HOLD REQUEST UI
30999319	30763056	BILL SEARCH: DUPLICATE BILLS ARE DISPLAYING WHEN PERSON HAS DIFFERENT PRIMARY AND LEGAL NAMES
32180230	31978400	UNABLE TO ADD PRICE COMPONENT TIER VALUE WITH DEFAULT SEQUENCE 0
32179259	32150311	NOT ABLE TO SAVE THE DEAL IF ACCOUNT IS SEARCHED USING EXTERNAL ACCOUNT IDENTIFIER
32175489	30716640	POST-INSTALLING OF PATCH 30666420 - IN EXPORT TO EXCEL ONLY ACTIVE PL IS SHOWN
32142234	32092863	PAYMENT DATA RECORDS NOT LOADING

Bug Number	Copy of (Base Bug)	Description
32131083	32077163	GETTING ERROR "THE ZONE SQL NUMBER 1 HAS ENCOUNTERED AN EXCEPTION" IN SCHEDULER JOB MONITOR DASHBOARD
32126570	32112540	WESTPAC_NOT ABLE TO DELETE THE BILL_GIVING SQL ERROR CODE
32066112	31705050	ORACALENDAR BEHAVING INCORRECTLY(FORWARD PORT)
32066078	31816792	HEALTHCARE INBOUND MESSAGE - MAX SIZE ERROR ON PERSON IDENTIFIERS(FORWARD PORT)
32066059	31945818	PRICE ITEM CHARACTERISTIC TAKES LONGER TO UPLOAD ON UI (FORWARD PORT)
32063300	32007865	WESTPAC_DM: INCORRECT DEAL TO DO MESSAGE WHEN THE DEAL IS RETURNED TO SUBMITTER
32057361	31874958	CREDIT NOTE GENERATION WITH 'BILL APPROVAL' - ON
32051157	31674924	DBMS SCHEDULER EXISTING STARTED ENTRY FOR JOB OR THREAD PREVENTS JOB EXECUTION
32044417	31786537	BILL SEARCH SCREEN SLOWNESS LEADING TIMEOUTS FOR BILLS HAVING HIGHER FT&S
32040163	31965939	AFTER INSTALLING PATCH 31786537 QUERY IS STILL TAKING TIME
32037573	31896291	RATE SCHEDULE SHOWING DUPLICATE RECORDS
32025380	31832183	ZONE C1-REFBILPRD TIMING OUT IN PRODUCTION
32025367	31994370	C1-RFPAYMENT TIMEOUT DUE TO HEAVY CARDINALITY.
32020045	31809554	UPLOAD REQUEST : MAPPING UPDATE DISABLED ON GUI
31990719	31531633	RATE VALUE ALGORITHM PRECISION ISSUE
31989249	31878086	ADJUSTMENT UPLOAD TO DO ACTION ISSUE
31989034	31716671	ADJUSTMENT CHARACTERISTIC TYPE ISSUE
31988910	31758212	ERROR WHEN VIEWING CUSTOMER CONTACT FOR PERSON WITH ONLY ACCOUNT OVERRIDE ADDRESS
31988891	31897258	ORMB 2901 AUTO PAYMENT JOB APAYCRET IS FAILING
31987979	31582418	ACCESS RIGHTS ISSUES WHILE USER GROUP CONFIGURATION
31987811	31119590	ISSUE WITH APPLICATION SERVICE FOR MEMBERSHIP PERSON UI
31987805	31895878	TO DO NOT GETTING COMPLETED EVEN AFTER APPROVING THE ON DEMAND UPLOADED FILE

Bug Number	Copy of (Base Bug)	Description
31987643	31901431	ISSUE WITH PATCH 31711690
31987628	31711690	FREEZE A BILL ON THE POPUP WINDOW, SEE TWO DATE FIELDS.
31987386	31862121	ORMB BILL DRILL DOWN SCREEN GOING IN TO ERROR
31983917	31927737	ENQ : TX - CONTENTION / ENQ : TX - INDEX CONTENTION ON CI_PER LOB COLUMNS.
31978805	31406270	WILD CARD SEARCH BASED ON % DOESN'T WORK ON IDENTIFIER COLUMN (FORWARD PORT)
31976960	31774819	ZONE C1-PAYSrch3 QUERY TIME OUT
31976857	31832580	AWR SHOWS HEAVY BUFFER GETS FOR SQL ID : 3G40Q3X0NZRBY & CNFHJ0F91AQ8M
31976414	31174813	NO NAVIGATION FOR GL ACCOUNTING TEMPLATE PROVIDED ON THE MENU (FORWARD PORT)
31976330	31377150	INVOICE CONSTRUCT MODIFYING AN APPROVAL TRANSACTION ALLOWS APPROVAL OF PENDING RECORD (FORWARD PORT)
31976293	31656315	NOT ABLE TO COPY PRICELIST BY CHANGING PRICELIST DESCRIPTION (FORWARD PORT)
31976287	31818244	FORWARDPORT - FETCH FUNCTION INVOCATION ISSUES
31976272	31705040	"LENGTH OF VALUE (OF THE DUMMY CONSTRUCT ID CREATED FOR APPROVAL TXN) IN BYTES TOO LONG "ERROR WHILE VIEWING COMPARISON UI FOR INVOICE CONSTRUCT APPROVAL WORKFLOW (FORWARD PORT)
31976271	31736214	FORWARDPORT - C1-FRSUP BATCH WRONG OUTPUT ON HSBC PROD
31976259	31709752	ISSUE IN DISPLAYING CHAR VALUE ON PRICE ASSIGNMENT VIEW SCREEN (FORWARD PORT)
31976234	31696536	PRICE DETAILS ARE NOT ORDERED CORRECTLY IN PRICE ASSIGNMENT TREE (FORWARDPORT)
31976211	31929631	DELETE AND EDIT JUNK VALUES EXPORTED TO EXCEL FOR PRICE ITEM PRICING DATA(FORWARD PORT)
31976199	31844280	LINK ON APPROVAL TRANSACTION ID IS MISSING WHILE SEARCHING APPROVAL ID ON WORKFLOW (FORWARDPORT)
31976163	31869701	ORMB 2900 PRICELIST PRICING EDIT TAKING TIME TO LOAD(FORWARD PORT)
31976029	31865554	FORWARDPORT - RECORDS IN FILES FOR FILE REQUEST TYPE CONFIGURED WITH FILE FORMAT AS JSON ARE NOT GETTING PROCESSED

Bug Number	Copy of (Base Bug)	Description
31976019	31818068	FORWARDPORT - ISSUES ON DATA EXTRACTION REQUEST TYPE MODULE
31976003	31732768	FORWARDPORT - FILE REQUEST TYPE FUNCTIONS
31975984	31604214	FORWARDPORT - CLIENT T1 FILE UPLOAD
31975929	31475880	FORWARDPORT - FILE MANAGEMENT SYSTEM UPLOAD SCREEN ISSUE
31958613	31839439	"THE SERVER HAS ENCOUNTERED A PROBLEM" ERROR DURING ADJUSTMENT UPLOAD
31895474	31572294	C1-RFPAYSRH1 BATCH PERFORMANCE ISSUE
31880031	31834896	PAYMENT SQL ERROR CODE 000099997 OCCURED IN MODULE CIPPPAYR
31832456	31726546	ADJUSTMENT TYPE FIELD IS MISSING WHEN RUNNING C1-PAYBT
31751520	31747543	HEALTHCARE INBOUND MESSAGE DOES NOT STORE EMAIL ADDRESS ON PERSON(FORWARD-PORT)
31750568	31555224	INCORRECT MEMBER COUNT SQI VALUE GETTING CALCULATED FOR INACTIVE DEPENDENT (FORWARD-PORT)
31750550	31637812	PERFORMANCE ISSUE DUE TO C1-LINKACCIC POST PROCESSING BASE ALGORITHM ON ACCOUNT BO(FORWARD-PORT)
31728435	31358731	"SAME ACCOUNT CAN NOT BE LINKED MULTIPLE TIMES WITH A STATEMENT CONSTRUCT" ERROR WHEN PROCESSING INBOUND MESSAGE HAVING STATEMENT CONSTRUCT DETAILS (FORWARD PORT)
31692395	31416598	ERROR BEING ENCOUNTERED WHILE TRYING TO CHANGE BILL ADDRESS SOURCE FLAG TO PERSON
31594075	31492965	PERFORMANCE ISSUE DURING CREATION OF PRICING RULE(FORWARD PORT)
31564454	31407375	ACCOUNT NUMBER UNMASKED IN AUTOMATIC PAYMENT AND REFUND CLEARING STAGING (FORWARD PORT)
31539423	30900684	IN PAYMENT UPLOAD, IT IS NEEDED EXT_REFERENCE_ID AS ONE OF THE CSV FIELD.
31522999	31421033	PENDING APPROVAL STATUS CONSTRUCT ON SEARCH ALSO SHOWS CONSTRUCT IDS WITH APPROVED AND CANCELLED STATUS
31479251	31022588	BILL SEGMENTS AND CALC LINES AMOUNTS NOT MATCHING
31330916	30677700	C1-ACSSL JOB - GET WORK UNIT PROCESSING TAKES MORE TIME
31302825	31138777	LINE ITEMS UI ISSUES ON LEVEL FUNDED (LF) PRICING RULE
31218307	30666420	NOT ABLE TO SEARCH PRODUCT IN EFFECTIVE PRICING WHEN PL IS PROPOSE & PRICING IS ACTIVE
31216499	31099528	SPECIFIC STOP LOSS PRICING RULE NOT DEFAULTING LINE ITEMS(FORWARD PORT)

Bug Number	Copy of (Base Bug)	Description
<u>31183870</u>	<u>30937171</u>	INCORRECT AMOUNTS ON THE DISCREPANCY REPORT LINE GENERATED
<u>31183390</u>	<u>31020908</u>	VGBP - APPROVAL TRANSACTION - CHANGE LOG IS NOT GETTING UPDATED FOR DELETED SCENARIO(FORWARD PORT)
<u>31167645</u>	<u>30926262</u>	PUPL WITH BILWPRPD MATCH TYPE NOT PROCESSING BILLS HAVING >= 25000 FTS
<u>31167641</u>	<u>30926262</u>	PUPL WITH BILWPRPD MATCH TYPE NOT PROCESSING BILLS HAVING >= 25000 FTS
<u>31073008</u>	<u>30936900</u>	ADD/UPDATE ADDITIONAL RELATED PERSONS TO A BILL GROUP VIA HEALTHCARE INBOUND MESSAGE(FORWARD PORT)
<u>30598303</u>	<u>29634808</u>	EFFECTIVE PRICING SCREEN DOES NOT SHOW VALUES OF VIEW RATE FIELD

Known Issues

This section lists the known issues in Oracle Revenue Management and Billing Version 2.9.0.1.0 along with workarounds available to handle these issues. The known issues are grouped into the following categories:

- [Banking](#)
- [Insurance](#)
- [Documentation](#)

Banking

Issue	SEARCH RESULT FOR EXCHANGE RATE NOT DISPLAYED CORRECTLY
Description	Searching for the lowest precision rate (0.000000000000000001 /0.000000000000000011/0.000000000000000023) from the Search Exchange Rate zone results in displaying the rate in exponential format "IE -18".
Workaround	None

Issue	VALIDATION RULES FOR ADHOC CHARACTERISTIC TYPES ARE NOT TRIGGERED IN THE MANAGE PRODUCTS, MANAGE PRICE LISTS, ADD PRODUCT PRICING, OVERRIDE PRODUCT PRICING, AND EDIT ASSIGNED PRICING SCREENS
Description	When you associate adhoc characteristic types with a product, price list, and a price assignment, validations defined for adhoc characteristic types are not triggered in the Manage Products, Manage Price Lists, Add Product Pricing, Override Product Pricing , and the Edit Assigned Pricing screens.
Workaround	None

Issue	UNABLE TO CHANGE THE DIVISION STATUS FROM ACTIVE TO RETIRED
Description	When the approval workflow functionality is enabled, the status of a division will not get changed from Active to Retired .
Workaround	None

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	PRE-VALIDATION ERROR MSG FOR INVOICING GROUP EVEN IF PRE-VALIDATION IS OFF
Description	If you set the Pre-validation flag for both the groups (that is, C1IGADD and C1IGUPD) to N , the validation will still be triggered before the approval workflow request is created.
Workaround	None

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	VIEW RULE TYPE SCREEN - PERFORMANCE ISSUE
Description	If you define a transaction record type with the maximum accounts to be charged set to 5, maximum products to be mapped set to 10, and the maximum product parameters set to 15 and view the details of the rule type, you might experience delay in loading the View Rule Type screen.
Workaround	None

Issue	C1-TXCNC BATCH GETS EXECUTED SUCCESSFULLY EVEN IF C1-TXNCU BATCH FAILS
Description	<p>When you execute the C1-TXNCU batch with either of the following parameters during the cancellation process, an error occurs:</p> <ul style="list-style-type: none"> • Transaction Source • Division <p>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 SQLs on the billable charges are not accurate.</p>
Workaround	None

Issue	ERRONEOUS RESULTS WHEN BILLABLE CHARGES ARE VOLUMINOUS & SESSION TIMEOUT IS LOW
Description	While billing, you may notice erroneous results when the default session timeout is low and the number of billable charges of an account are high.
Workaround	In such case, we recommend you to generate the bill through a batch process instead of generating the bill through the Bill screen.

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	<p>During the transaction disaggregation process, you must execute the following batches in the specified order:</p> <ol style="list-style-type: none"> 1. Identify Affected Transactions (C1-IAENT) 2. Process Non Aggregated Transactions (C1-PDTXN) 3. Clean Up (C1-TXNCU) 4. Update Disaggregation Request Status (C1-DARSU) <p>Otherwise, erroneous results might occur.</p>
Workaround	None

Issue	PERFORMANCE ISSUE WHILE EXECUTING THE C1-DARSU BATCH WHEN REQUEST_TYPE_FLG=PERS
Description	The system takes long time to change the disaggregation request status when the disaggregation request is created for a person.
Workaround	None

Issue	AGGREGATION DOESN'T WORK IF DISAGG, ROLLBACK, & CANCELLATION EXECUTED IN BETWEEN
Description	If you execute the disaggregation, cancellation, and rollback process in between the aggregation process, the system will not allow you start the aggregation process once again.
Workaround	None

Issue	POST PROCESSING SEGMENT NOT GENERATED IF THE PP MAX VALUE IS SET TO ZERO (0)
Description	If the maximum value is set to zero (0) while defining pricing for a product have price assignment type as post processing, the system does not generate the post processing segments for such products.
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	ERROR OCCURS IN CASE OF AN IGA SCENARIO WHILE EXECUTING THE C1-PNDBL BATCH
Description	There might be situations when you add an account to an invoicing group after a bill is generated for the account using the new billing batches (i.e. C1-PNDBL, C1-BSGEN, and C1-BLPPR). In such scenario, an error occurs when you execute the C1-PNDBL batch once again to bill charges of the member account on the master account. Similarly, an error occurs when you generate the bill for the account which was earlier billed through the master account using these billing batches.
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 (<code>_</code>) character in the search criteria, the system does not search strings with the underscore character. Instead, the system interprets the underscore (<code>_</code>) character as a wildcard character.
Workaround	None

Issue	MULTIPLE ISSUES ON SCREENS AND ZONES WHERE PAGINATION IS USED
Description	There are various issues on the screens and zones where pagination is used. For example, the buttons and icons do not appear in the F1-DE-MULQRY zones, paging keys are trimmed, and so on.
Workaround	<p>To resolve these pagination related issues, you need to apply framework single fixes which are available for the following bugs:</p> <ul style="list-style-type: none"> • 20302717 - PAGINATION PANEL SHOWING INCORRECT VALUE FOR TOTAL PAGES AND CUSTOM ICONS DO NOT • 20261532 - PAGINATION PANEL IS BEING DISPLAYED ON ORASEARCH OPERATION • 20113520 - BUTTON AND ICON DOESN'T APPEAR FOR PAGINATION IN F1-DE-MULQRY ZONES • 19941127 - PAGINATION FEATURE NOT WORKING FOR SUBQUERIES USED IN ZONE SQL • 19163528 - PAGINATION : PAGING KEY GETS TRIMMED AND RETURNS NO RESULTS • 18965501 - PAGINATION : ALL THE PAGES DISPLAY SAME SET RECORDS WHEN EQUAL OPERATOR IS USED • 18953690 - PAGINATION: ROW SERIAL NUMBERS RESET WHEN WE SORT COLUMN, AFTER "NEXT" CLICK • 18887503 - PAGINATION DOCUMENTATION NEEDS MORE DETAIL • 18639253 - PAGINATION - MISSING ICON, PAGE LABEL AND PAGE SIZE • 18491431 - DATA EXPLORER PAGINATION IS NOT CONSIDERING THE SQL COUNT LIMIT ZONE PARAMETER • 18399979 - PAGINATION - CRASHING IF PAGING COLUMN IS NOT DISPLAYED • 18399934 - PAGINATION - NOT WORKING FOR DESCENDING SORT • 20864137 - PAGINATION DOES NOT WORK PROPERLY WHEN PORTAL HAS MULTIPLE BROADCAST ZONES

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	C1-ADUP1 BATCH DOES NOT SUPPORT MULTI-CURRENCY ACCOUNTS FEATURE
Description	An error occurs while executing the C1-ADUP1 batch when the adjustment currency is different from the account's invoice currency. This is because, at present, the C1-ADUP1 batch does not support the Multi-Currency Accounts feature.
Workaround	None

Issue	ABLE TO CREATE BILLABLE CHARGES FOR AN INVOICE ACCOUNT
Description	Ideally, the system should not allow you to create billable charges for an invoice account. At present, there is no restriction, and therefore you can create billable charges for an invoice account which are billed through the invoice account.
Workaround	None

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	LENGTH OF UDF_CHAR_X IS 50 IN THE TFM ODI PACKAGE AND 60 IN THE DATABASE
Description	In the ORMB database, the maximum size of the UDF_CHAR_1, UDF_CHAR_2, ..., UDF_CHAR_50 columns is set to 60 characters. However, while uploading the transaction data via ODI, you can specify maximum 50 and not 60 characters in the CSV file.
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	UNABLE TO SAVE MULTIPLE CHARACTERISTICS FOR A PRICE ASSIGNMENT
Description	While defining characteristics for a price assignment, you can specify multiple characteristics in the screen, but only one characteristic is saved in the application.
Workaround	None

Issue	UNABLE TO SCROLL LEFT TO VIEW TABS ON THE LEFT IN THE DIVISION SCREEN
Description	The Scroll Left icon is not available in the Division screen. Therefore, you will not be able to scroll left if you are on the extreme right tab in the screen.
Workaround	None

Issue	POP-UP WINDOW NOT DISPLAYED PROPERLY WHEN YOU MOUSE OVER DETAILED DESCRIPTION
Description	In the Batch Control screen, a pop-up window appears when you move the mouse over the Detailed Description field. At present, the data is not properly displayed in the pop-up window.
Workaround	None

Issue	QUERY ZONE - HORIZONTAL SCROLL BAR SCROLLS THE SEARCH CRITERIA FIELDS
Description	The Query zone allows you to search for an object. At present, whenever you search in the Query zone and use the Horizontal Scroll Bar, the search criteria fields are also scrolled to the left along with the search results.
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	RECORDS IN THE ADJUSTMENT DATA FILE NOT UPLOADED IN THE SPECIFIED SEQUENCE
Description	When you upload the records of an adjustment data file, the records are not uploaded in the sequence in which they are listed in the CSV file.
Workaround	None

Issue	PAYMENT/TENDER SEARCH- COLUMN HEADERS INCORRECT WHEN SEARCH FILTER IS CHANGED
Description	If you search using a particular filter option in the Payment/Tender Search screen, the search results are displayed accordingly. Then, if you change the search filter and criteria, the search results are displayed accordingly, but the column headers are not updated.
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: <ul style="list-style-type: none"> • BILLING • C1-BLPPR
Workaround	None

Issue	FIELD ALIGNMENT ISSUE ON BUSINESS OBJECT BASED GENERATED UI MAPS
Description	You may observe that the algorithm description is not properly aligned corresponding to the Algorithm field in the following screens: <ul style="list-style-type: none"> • Upload Request Type • Upload Adjustment Data File
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

Issue	ELIGIBILITY 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	WRONG CURRENCY CONVERSION ALGORITHM IS USED WHILE EXECUTING THE C1-REPC2 BATCH
Description	While executing the C1-REPC2 batch, the system should use the currency conversion algorithm attached to the Currency Conversion For Bill Segments algorithm spot of the division. Instead, the system uses the currency conversion algorithm attached to the Currency Conversion For Adjustments algorithm spot of the division.
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

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

Issue	CALENDAR (START DATE AND END DATE) POP-UP NOT ALIGNED PROPERLY
Description	Calendar pop-up for start date and end date of Hold Request screen is displayed partially outside the screen.
Workaround	None

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

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.

Issue	IF USAGE ACCOUNT IS NOT PART OF ANY INVOICE CONSTRUCT, BILL IS NOT GENERATED.
Description	At present system does not allow user to generate a bill on usage account which is not part of any invoice construct. System should allow user to generate a bill on usage account which is not part of any invoice construct.
Workaround	None

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

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

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

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

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

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

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

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

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

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	OVERRIDE DUE DATE NOT CALCULATED CORRECTLY IN CASE OF REINSTATEMENT
Description	If a customer is not active (i.e. does not have at least one active policy) and reinstatement request is received to reinstate the customer's policy which is terminated due to non-payment, the system should override the due date on the next bill using the Days Until Due parameter in the C1-DUEDTFTCV algorithm which is attached on the respective customer class. As per this algorithm, the override due date should be calculated as bill date plus days until due. However, at present, the system does not override the due date using the Days Until Due parameter. It reflects the due date which is the next coverage period start date.
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	PERCENTAGE (%) WILDCARD NOT ALLOWED IN PERSON NAME WHILE SEARCHING FOR AN ENTITY
Description	The system does not allow you to specify the Percentage (%) wildcard in the Person Name field while searching for any entity across application. At present, the system automatically appends the criteria in the Person Name field with the Percentage (%) wildcard and accordingly searches for the entity.
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

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/COMMITMENT 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	VIEW PRICING SCREEN :- PRICE ITEM IS NOT SEARCHING USING PRICE ITEM FILTER OPTION
Description	The Price Item field is not working while filtering data in the Pricing and Commitment Details screen.
Workaround	None

Issue	VIEW PRICING SCREEN (PERFORMANCE ISSUES) :- IT IS TAKING SO MUCH TIME TO OPEN THE SCREEN EVEN IF I WILL CHANGE ANY RATE OR COMMITMENT AND BACK ON VIEW PRICING SCREEN TAKING SO MUCH TIME
Description	The Pricing and Commitment Details screen takes time to reload when you change the proposed rate or commitments.
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	REST SERVICES DO NOT WORK ON WEBSHERE
Description	At present, calls to RESTful web service do not work as expected on the WebSphere application server.
Workaround	Use Inbound Web Service (IWS)

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

Insurance

Issue	OLD INSURANCE FEATURES ARE NOT TESTED AND VERIFIED IN ORMB VERSION 2.9.0.1.0
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

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.

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

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

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

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

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

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

Issue	ONLINE HELP NOT AVAILABLE FOR SOME SCREENS OR TABS
Description	<p>At present, the online help is not available for the following screens:</p> <ul style="list-style-type: none"> • Collection Type • Loan • Request <p>In addition, the online help is not available for the following tabs:</p> <ul style="list-style-type: none"> • Rate Schedule – SQ Rule Tab
Workaround	None

Issue	INDEX ENTRIES NOT DEFINED FOR THE BANKING AND INSURANCE MODULES
Description	At present, index entries are not defined for all topics in the Banking and Insurance modules.
Workaround	None

Issue	CONTENT ADDED IN STEPRESULT AND INFO TAGS IS DISPLAYED IN BOLD
Description	At present, the content added within the STEPRESULT and INFO tags is displayed in bold in the online help. This behavior is observed in Oracle Help and not in SPLHelp.
Workaround	None

Issue	COMMENTS NOT COPIED IN MAIL WHILE SUBMITTING FEEDBACK TO THE DOCUMENTATION TEAM
Description	The feedback entered in the Comments text box is not copied to the mail while submitting the feedback form in Oracle Help.
Workaround	You will have to manually add the comments in the e-mail before sending the feedback to the documentation team.

Technical Support

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