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Reporting User Guide

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Oracle Revenue Management and Billing Reporting User Guide

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Preface

About This Document

This document helps you to understand ORMB Reporting which is a unique platform that enables customers to uncover new insights and make faster, more informed business decisions by offering with best-in-class enterprise reporting.

- You need to deliver customized reports to different people in different departments and to your customers on time
- Allows implementers to efficiently create and update document templates
- Supports web based reporting

Intended Audience

This document has intended for the following audience:

- End-users
- Implementation Team
- Consulting Team
- Development Team

Organization of the Document

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

Section No.	Section Name	Description
Section 1	Overview	Explains the ORMB reporting.
Section 2	ORMB Frameworks	This section introduces the frameworks provided by ORMB and explains how you can use them to generate different reports.
Section 3	ORMB FOP framework Using Groovy	Explains how to use Groovy to generate different reports.

Related Documents

You can refer to the following documents for more information:

Document	Description
Oracle Revenue Management and Billing Banking User Guide	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.

Document	Description
Oracle Revenue Management and Billing Insurance User Guide	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.
Oracle Revenue Management and Billing Business Process Guide	Lists and describes various business process 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.
Oracle Revenue Management and Billing Administrative Guide	Lists and describes various administrative process 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.
User Guide For Report Generation Using ORMB Framework	Describes how to use reporting screens to generate reports.
User Guide for Letter and Bill PDF Generation Using FOP	Describes how to install and use apache FOP embedded framework to generate Bill's and Letter's or related documents.
Oracle Revenue Management and Billing Reporting Installation Guide	Lists and describes various FOP reporting installation 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.
Oracle Revenue Management and Billing Reporting SDK Guide	Lists and describes various FOP reporting SDK 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.

Conventions

The following conventions are used across the document:

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

Change Log

Revision	Last Update	Updated Section	Comments
2.1	19-Jan-2022	-	Added Bookmarks in PDF

Contents

1. Reporting Overview

Oracle Revenue Management and Billing Report provides different forms of report generation. This tool allows you to generate different reports or use the existing report formats as a base to create a new report.

The Oracle Revenue Management and Billing Reporting engine easily integrates into any existing infrastructure. It provides customizable design and data elements. The reports can be generated in various formats such as PDF, CSV, XML formats. The ORMB Report generation framework provides you an additional benefit of creating reports from Custom FOP Templates and API Access from Groovy.

2. Reporting Frameworks

This section introduces the frameworks provided by ORMB and explains how you can use them to generate different reports. The two frameworks are:

- ORMB Framework
- Apache FOP framework template

2.1 Reporting Using ORMB Framework feature

The ORMB Reports using ORMB framework feature consists of the following zones:

2.1.1 Submit Report Zone

This is an Explicit Object Map type zone with a UI map named 'C1-ReportType', which contains reports that you can use for reporting, or as a starting point for creating a new report.

You can use this UI map to add some more reporting UI maps or navigation of custom reports.

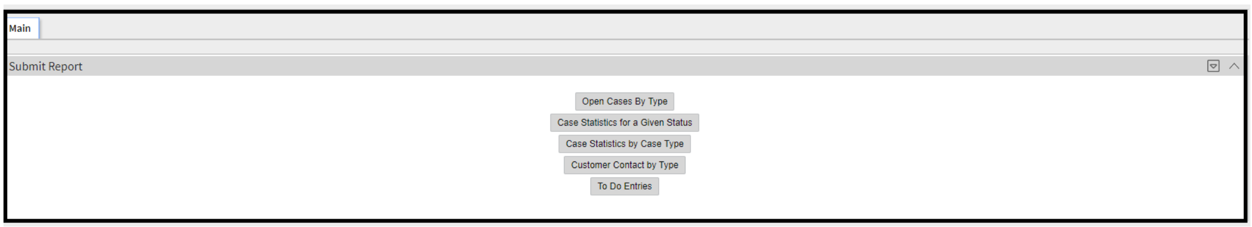

Figure 1: Submit Report Zone

2.1.2 BPA Script

This script is used to configure steps of report display. Using this script, users can navigate from submit Report screen to Report detailed screen.

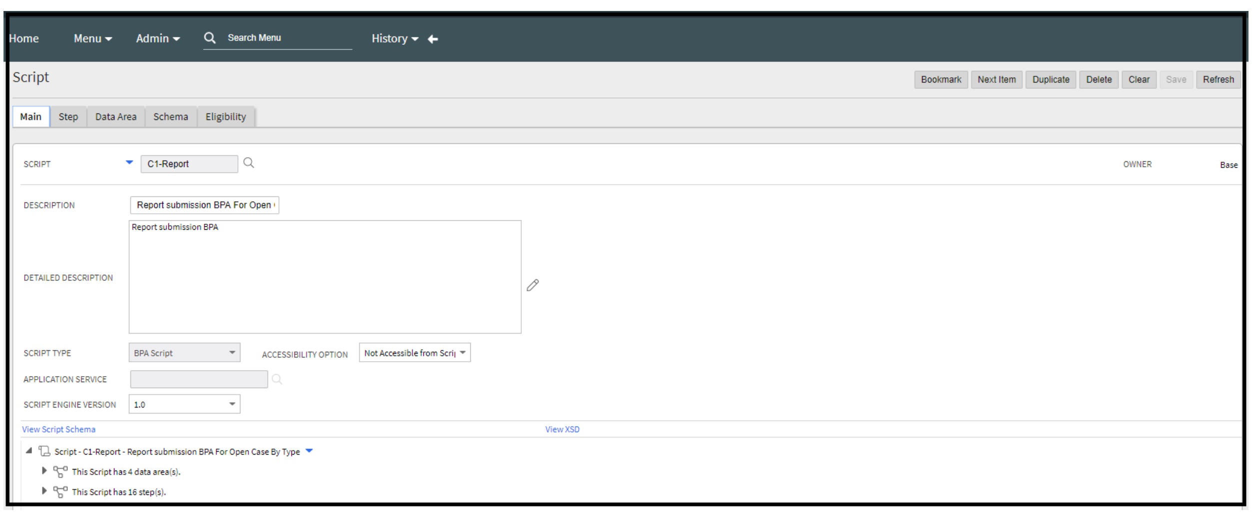

Figure 2: BPA Script

The script contains a total of 16 steps that are used to display final report.

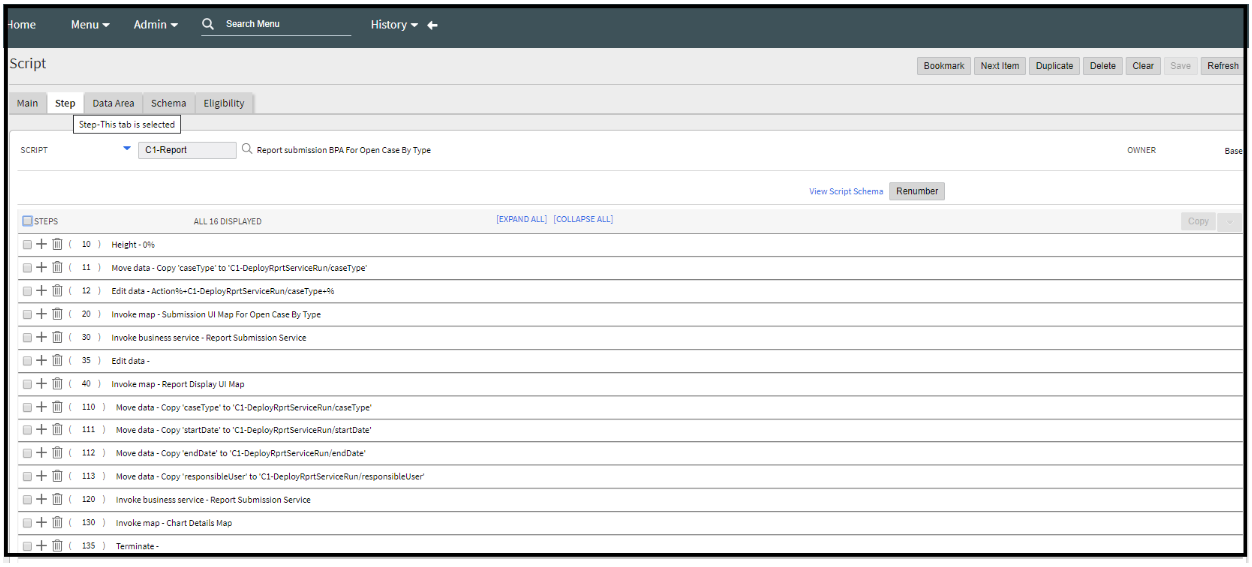

Figure 3: Steps

The Data Area within the script has three UI maps and one Business Service (BS). The below mentioned data area types relate to UI:

- **C1-ReportSubmission** - This UI map is responsible to take user input and pass it to the BS.
- **C1-ChartDetailsUI map** - Once data is received from BS using framework graph feature, it generates graphs and displays the same on the screen. If there is no data against the entered criteria, it displays a blank screen.

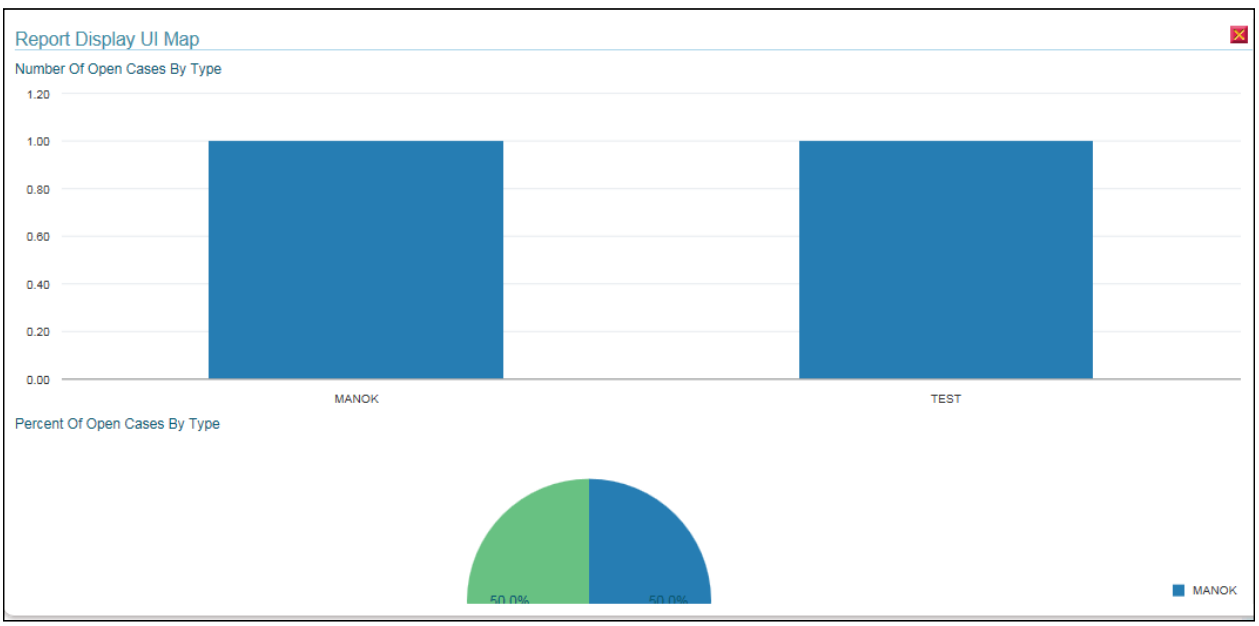

Figure 4: C1-ChartDetailsUI map

- **C1-ReportDisplayUI** – You can navigate to report details screen by clicking on the chart region. The actual records are displayed.

- **C1-DeployRprtServiceRun –** Once the user fills all the above details and click on Submit button all input through BPA will send to the BS and this BS will get the all data from database and send back to the chart details UI map.

2.1.3 List of Reports Bundled With the Application

ORMB provides you with five different reports that you can use for reporting or as a starting point for creating a new report.

2.1.3.1 Open Cases By Type (CI_CSEOPN)

This type of migration request defines a set of migration plans to be logically included together as part of a migration. The Open Cases by Type (CI_CSEOPN) report allows you to view cases that are currently open. The data grouped based on the case type. For each case type, the report shows:

- Number of open cases by age bucket (the last 3 parameters control the size (in days) of each bucket)
- Percentage of open cases by age bucket
- Details of open cases

To generate the CI_CSEOPN report:

1. From the Admin Menu, select R and then click Report Submission.
2. Reporting Portal screen appears. The available report submission options displayed as below:

Figure 5: Open Cases By Type

3. Click **Open Cases By Type**. The **'**Submission UI Map For Open Case By Type' screen appears with the following parameters:

Field Name	Field Description	Mandatory (Yes or No)
Start Date (YYYY-MM-DD)	Used to search for cases that are created on or after the specified date and are still open. **Note**: If you do not specify the start date, system sets the start date to the current date minus seven days.	No
End Date (YYYY-MM-DD)	Used to search for cases that are created on or before the specified date and are still open.	No

	Note: If you do not specify the end date, system sets the current date as the end date.	
Case Type	Used to specify the case type. **Note:** If you specify the case type, only open cases of that type are listed in the report.	No
Responsible User	Used to specify the user name. **Note:** If you specify the user name, only open cases that are handled by that user are listed in the report.	No
First Bucket High Limit	Used to group cases that are open for less than or equal to the specified number of days.	Yes
Second Bucket High Limit	Used to group cases that are open for less than or equal to the specified number of days, but greater than the number of days specified in the First Bucket High Limit field.	Yes
Third Bucket High Limit	Used to group cases that are open for less than or equal to the specified number of days, but greater than the number of days specified in the Second Bucket High Limit field.	Yes

4. Enter the parameters based on which you want to generate the report.
5. Click **Submit**. The report opens directly in application using UI MAP.
6. Click on the graphs to open the detailed report.

2.1.3.2 Case Statistics For A Given Status (CI_CSESGS)

The Case Statistics for a Given Status (CI_CSESGS) report allows you to view cases of a given case type that transitioned to a given status within a given date range. It also shows the number and percentage of cases grouped by the time it took to reach the status in the graphical format. These statistics are grouped into age buckets whose size (in days) is controlled by the following parameters:

- First Bucket High Limit
- Second Bucket High Limit
- Third Bucket High Limit

Additionally, this report shows the minimum, maximum, average, and median time taken to reach the status.

To generate a CI_CSESGS report:

1. From the Admin Menu, select R and then click Report Submission.

2. Reporting Portal screen appears. The available report submission options are displayed as shown below:

Figure 6: Case Statistics for a Given Status

3. Click **Case Statistics for a Given Status**. The 'Submit Case Statistics for a Given Status' screen appears with the following parameters:

Field Name	**Field Description**	**Mandatory (Yes or No)**
Start Date (YYYY-MM-DD)	Used to search for cases of a given case type that transitioned to a given status on or after the specified date. **Note**: If you do not specify the start date, the system sets the start date to the current date minus seven days.	No
End Date (YYYY-MM-DD)	Used to search for cases of a given case type that transitioned to a given status on or before the specified date. **Note**: If you do not specify the end date, the system sets the current date as the end date.	No
Case Type	Used to specify the case type for which you want to generate the report.	Yes
Case Status	Used to specify the case status for which you want to generate the report.	Yes
Responsible User	Used to specify the user name. **Note**: If you specify the user name, only cases that are handled by that user are listed in the report.	No
First Bucket High Limit (in days)	Used to group cases that took less than or equal to the specified number of days to reach a given status	No
Second Bucket High Limit (in days)	Used to group cases that took less than or equal to the specified number of days, but greater than the number of days specified in the First Bucket High Limit field to reach a given status	No

Third Bucket High Limit (in days)	Used to group cases that took less than or equal to the specified number of days, but greater than the number of days specified in the Second Bucket High Limit field to reach a given status	No

4. Enter the parameters based on which you want to generate the report.
5. Click Submit. The report opens directly in the application using UI MAP.
6. Click on the graphs generated to view the detailed report.

2.1.3.3 Case Statistics By Case Type (CI_CSESTS)

The Case Statistics by Case Type (CI_CSESTS) report allows you to view the number and percentage of cases that are open and/or closed. This report provides two types of statistics:

- Open cases whose creation date falls between the input date range (inclusive)
- Closed cases whose closing date falls between the input date range (inclusive)

The third parameter is used if you want to restrict the statistics to only open or closed cases. If you leave this parameter blank, both open and closed statistics are produced. The following information is provided:

- Number of cases by type
- Percentage of cases by type

To generate the CI_CSESTS report:

1. From the Admin Menu, select R and then click Report Submission.
2. Reporting Portal screen appears. The available report submission options are displayed as below:

Figure 7: Case Statistics by Case Type

3. Click **Case Statistics by Case Type**. The **'**Case Statistics by Case Type' screen appears with the following parameters:

Field Name	Field Description	Mandatory (Yes or No)
Start Date (YYYY-MM-DD)	Used to search for the following: • Cases that are created on or after the specified date and are currently open • Cases that are closed on or after the specified date	No
End date (YYYY-MM-DD)	Used to search for the following:	No

	• Cases that are created on or before the specified date and are currently open • Cases that are closed on or before the specified date	
Case Condition	Used to indicate whether you want to generate the report for open or closed cases. • OPEN • CLSD If you want to generate the report for both open and closed cases, leave this field blank.	No

4. Enter the parameters based on which you want to generate the report.
5. Click **Submit**. The report opens directly in application using UI MAP.
6. Click on the graphs generated to open the detailed report.

2.1.3.4 Customer Contact By Type (CI_CUSTCN)

This report lists all customer contacts in the system created within the input date range. You may optionally restrict the report to customer contacts for a given Customer Contact Type / Class (parameter 3/4). Note, the information on this report is shown in both textual and graphical formats.

The Customer Contact by Type (CI_CUSTCN) report allows you to view all customer contacts that are created for a given contact class and contact type within a given date range. It displays information both in textual and graphical formats.

To generate the CI_CUSTCN report:

1. From the Admin Menu, select R and then click Report Submission.
2. Reporting Portal screen appears. The available report submission options are displayed as below:

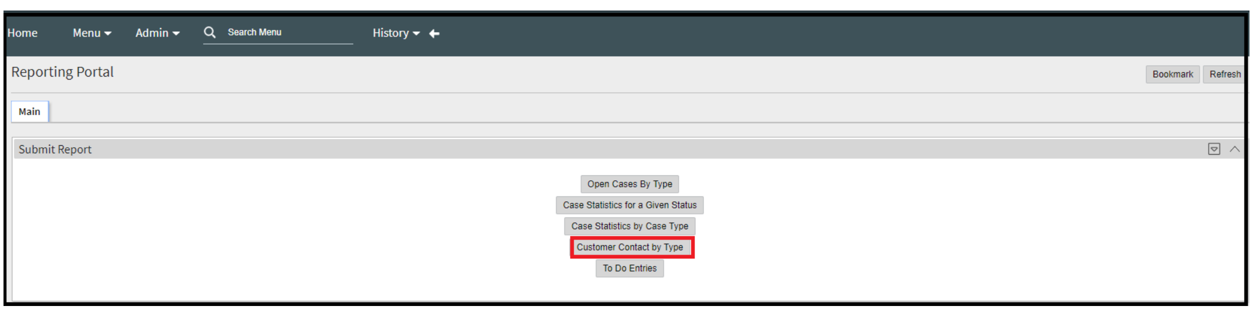

Figure 8: Customer Contact by Type

3. Click **Customer Contact By Type**. The 'Customer Contact by Type' screen appears with the following parameters:

Field Name	Field Description	Mandatory (Yes or No)
Start Date (YYYY-MM-DD)	Used to search for persons' contacts that are created on or after the specified date.	No

End date (YYYY-MM-DD)	Used to search for persons' contacts that are created on or before the specified date.	No
Customer Contact Type	Used to specify the customer contact type for which you want to generate the report. If you want to generate the report for all contact types within a given contact class, just specify the customer contact class. However, if you want to generate the report for a given contact type within a given contact class, then specify customer contact class as well in the next field.	No
Customer Contact Class	Used to specify the customer contact class for which you want to generate the report.	No

4. Enter the parameters based on which you want to generate the report.
5. Click **Submit**. The report opens directly in the application using UI MAP.
6. Click on the graphs generated to open the detailed report.

2.1.3.5 To Do Entries (CI_TDENTR)

The To Do Entries (CI_TDENTR) report allows you to view the total number of To Do entries that are open or being worked on for each To Do type. It displays information both in textual and graphical formats.

Note: You can limit the report to entries in a given status by specifying the desired status (open or being worked) below. If you do not specify a status, all open and being worked, To Do entries will appear on this report.

You can also limit the report to entries of a given To Do Type by specifying the desired To Do Type below. If you do not specify a To Do Type, all To Do Types with at least one entry in the open / being worked state will appear on this report.

To generate the CI_TDENTR report:

1. From the Admin Menu, select R and then click Report Submission.
2. Reporting Portal screen appears. The available report submission options are displayed as below:

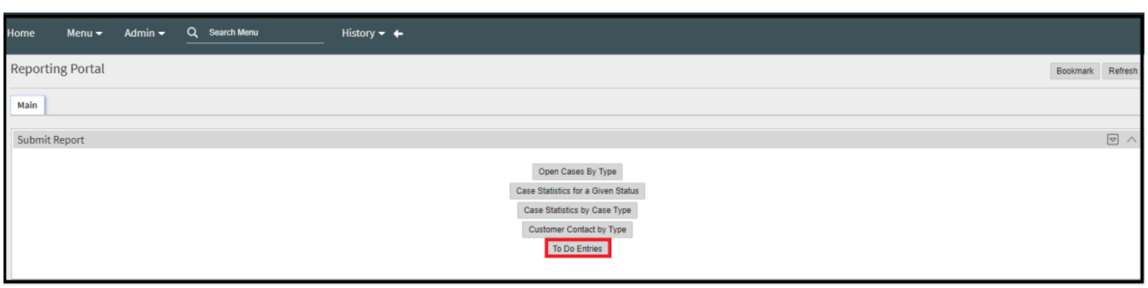

Figure 9: To Do Entries

3. Click **To Do Entries**. The 'To Do Entries' screen appears with the following parameters:

Field Name	Field Description	Mandatory (Yes or No)
To Do Entry Status	Used to include To Do entries with the specified status in the report. **Note:** If you leave this field blank, the report shows To Do entries with all statuses.	No
To Do Type	Used to include To Do entries with the specified To Do type in the report. **Note:** If you leave this field blank, the report shows To Do entries with all To Do types.	No

4. Enter the parameters based on which you want to generate the report.
5. Click **Submit**. The report opens directly in the application using UI MAP.
6. Click on the graphs generated to view the detailed report.

2.2 Reporting Using Apache FOP framework template

2.2.1 What is Apache-FOP?

Apache FOP (Formatting Objects Processor) is a print formatter driven by XSL formatting objects. It is a Java application that reads a formatting object tree conforming to the XSL 1.1 Recommendation (05 December 2006) and then turns it into a PDF document or other output formats and allows you to preview it directly on screen.

It is a Java application that reads a Formatting Object (FO) tree and renders it to a specified output such as PDF, PS, XML, etc. The primary output target is PDF.

Refer official Apache FOP site at https://xmlgraphics.apache.org/fop/

The link for the github repo -> https://github.com/apache/fop

Note: Currently we support ORMB FOP reporting feature only to BILL and Letter PDF generation.

The goal of this **Quick Start Guide** is to help novice users get Apache FOP up and running quickly. Typically, you would need to:

1. Install FOP in ORMB.
2. Configure ORMB FOP Reporting.
3. Develop FOP template (XSL development).
4. Upload FOP templates using 'Reporting Template Upload' UI.
5. Develop an ORMB algorithm.
6. Call ORMB FOP framework API to generate PDF reports Bill and Letters.

2.2.2 Install FOP in ORMB

To configure and install FOP in ORMB framework, refer to ORMB Reporting Installation Guide.

2.2.3 Configure FOP in ORMB

ORMB Reporting tool allows you to configure FOP for Bill and Letter Templates.

To configure FOP for Bill:

1. From the **Admin** Menu, select **I** and then click **Installation Options - Framework**. The Installation Options - Framework screen appears.
2. Click the Algorithms tab
3. Go to 'Online Bill Display' in System Event and attach C1_FOPONBL to the **Online Bill Display** system event.

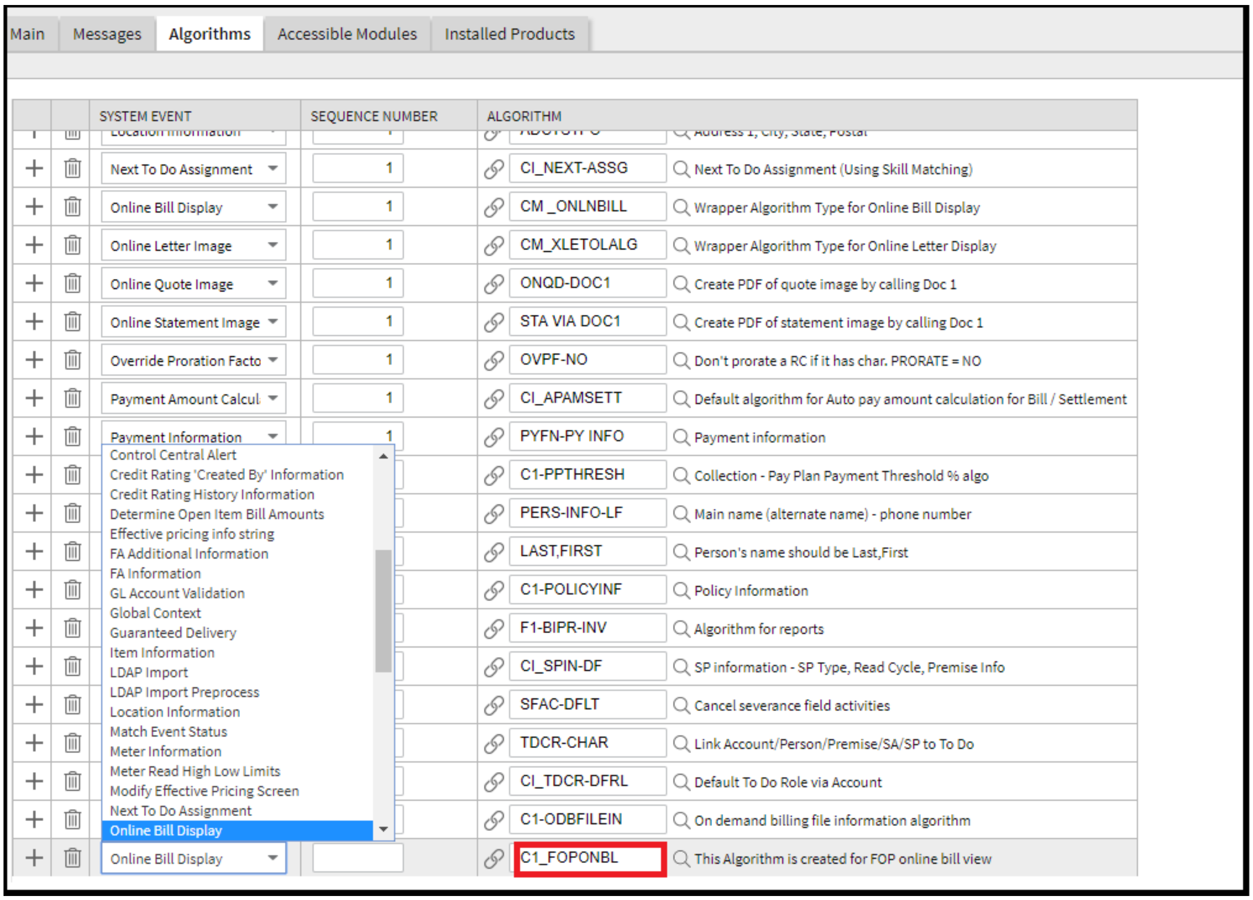

Figure 10: Online Bill Display

C1-FOPONBL is the algorithm code for the algorithm used to create an online bill view. The below table gives an overview of this algorithm:

Field	Description
Algorithm Code	C1_ FOPONBL

Description	This Algorithm created for FOP online bill view.
Algorithm Type	C1_FOPONBL
Algorithm Type Description	This Algorithm is created for FOP online bill view. It identifies the algorithms based on the Bill Route Type configuration (corresponding to a bill) and call the FOP code to generate PDF files. To generate a PDF file, it uses an FOP XSL template, which is uploaded from the Reporting template upload screen of Admin menu. Moreover, by using the extract algorithm configured on BILL ROUTE TYPE, generate the extract XML. Finally, by using FOP API it will generate the PDF file, which will be stored at output folder of reporting directory.

To configure FOP for Letter templates:

1. From the **Admin** menu, select **I** and then click **Installation Options – Framework**.
2. Click the **Algorithms** tab.
3. Go to 'Online Letter Image' in System Event and attach C1_ FOPLTRALG to the **Online Letter Image** system event.

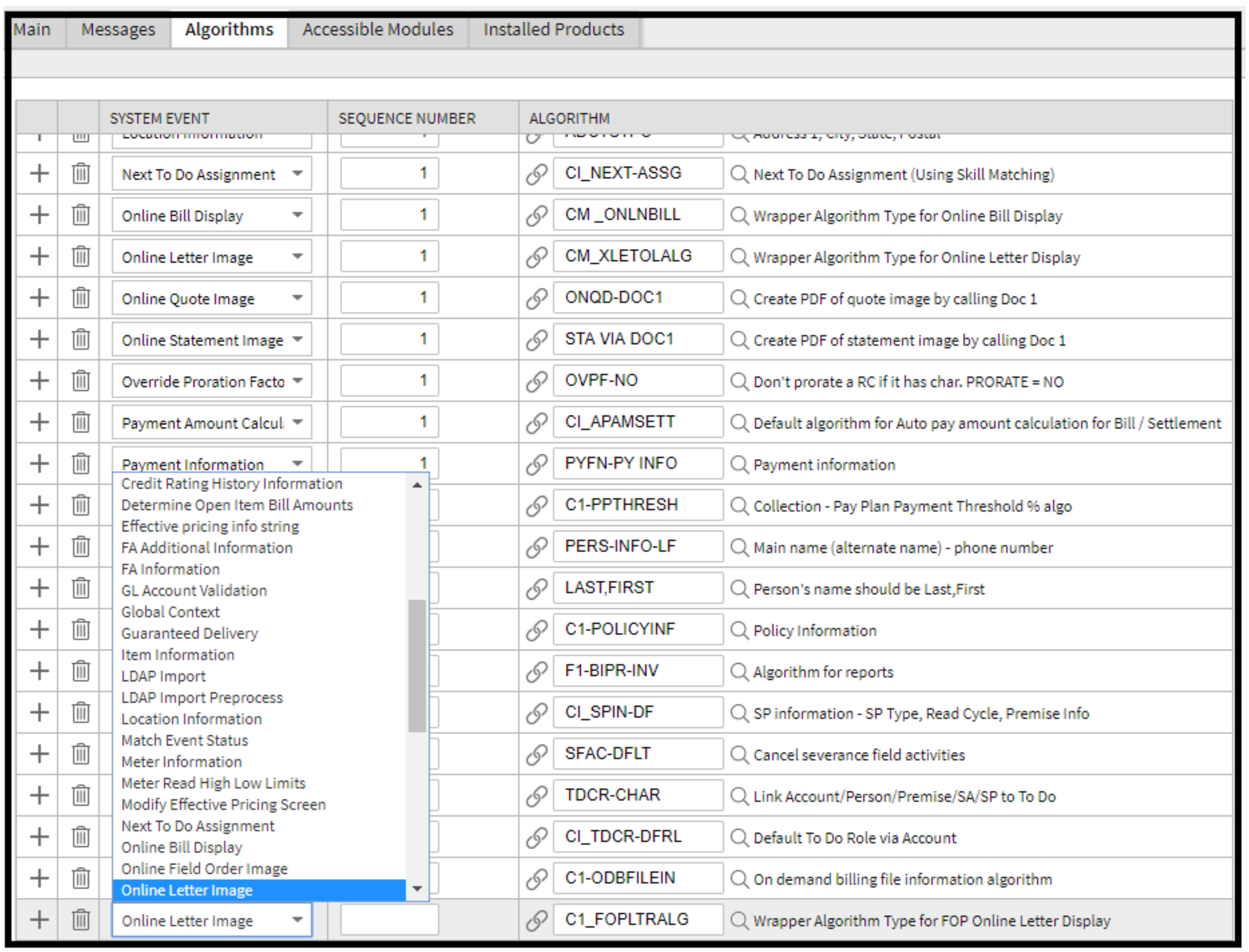

Figure 11: Online Letter Image

The below table gives an overview of this algorithm:

Algorithm Code	C1_ FOPLTRALG
Description	Wrapper Algorithm Type for FOP Online Letter Display
Algorithm Type	C1_FOPLTRALG
Algorithm Type Description	Wrapper algorithm internally calls letter extract algorithm as per the Letter Template configuration. It invokes an external system interface to send a request to the external system. It extracts the URL from the response and presents the bill online.

2.2.4 Develop template (XSL development)

To produce a PDF file from XML file, we need an XSLT stylesheet that converts the XML to XSL-FO. This is the first step in the processing chain. FOP will do the second step when it reads the generated XSL-FO document and formats it to a PDF document. You can copy the following minimal XSLT stylesheet.

To create a new FOP template, refer Oracle Revenue Management and Billing Reporting SDK Guide. For more details and XSLT stylesheet, refer below links:

https://netjs.blogspot.in/2015/07/how-to-create-pdf-from-xml-using-apache-fop.html

https://xmlgraphics.apache.org/fop/

The following table lists the FOP templates that come with Oracle Revenue Management and Billing:

1. Bill Template

Sr. No	FOP Template	Description
1	billExtract_Banking_Individual.xsl	FOP Template for Individual Billing
2	billExtract_Comm_Banking_List.xsl	FOP Template for List Billing

2. Letter Template

Sr. No	FOP Template	Description
1	ExpiringCreditCard_Letter.xsl	FOP Template for Expiring Credit Card Letter
2	PastDueExtract_Letter.xsl	FOP Template for Past Due Extract Letter
3	NoticeOfIntent_Letter.xsl	FOP Template for Notice Of Intent Letter
4	AutoPay_Letter.xsl	FOP Template for Auto Pay Letter

3. Custom

Sr. No	FOP Template	Description
1	CustomChartExample.xsl	FOP Template for Custom Report
2	CustomReport_Ref.xsl	FOP Template for Custom Report

4. Others

Sr. No	FOP Template	Description
1	User_Report.xsl	FOP Template for User Report
2	Trial_Bill.xsl	FOP Template for Trial Bill generation
3	DealExtract_External_Type.xsl	FOP Template for Deal Extract External Type
4	DealExtract_Internal_Type.xsl	FOP Template for Deal Extract Internal Type

2.2.5 Define Report Code to Generate Report

By using this feature of Reporting module, you can view multiple type of reports given below and upload respective FOP template and image in case of PDF format only.

- CSV Report(CSV)
- DOCX Report(DOCX)
- JSON Report(JSON)
- PDF Report(PDF)
- Web Report(WEB)
- XSL Report(XSL)
- XML Report(XML)

To upload the FOP template, follow below steps:

1. Go to **Admin** menu, select **R** and then click **Reporting Template**.
2. Report Definition screen appears. Click **Add**.

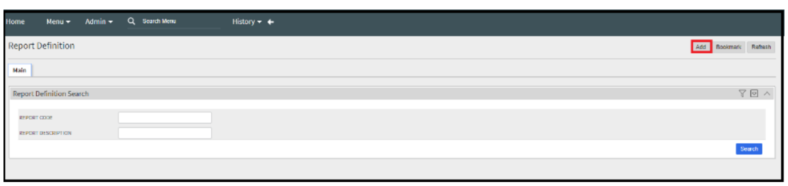

Figure 12: Report Definition

3. This opens another screen as below:

Figure 13: Report Definition - Add

4. Report Definition screen includes following parameters:

Field Name	Field Description	Mandatory (Yes or No)
Report Code	Used to specify the report type.	No
Report Description	Used to specify the report description.	No
Report Output Format	Used to specify possible output formats of a report. The available options are: • CSV Report(CSV) • DOCX Report(DOCX) • JSON Report(JSON) • PDF Report(PDF) • Web Report(WEB) • XSL Report(XSL) • XML Report(XML)	Yes
Report Type	Used to select the type of report. The available options are: • Bill • Custom • Letter	Yes
Script	This parameter is enabled only when the report output format is **WEB Report**.	No
Report Type Template	Used to upload Template parameter.	Yes
Report Process Algorithm Code	This is enabled when Report type is **Custom**.	No
Report Mode	Used to indicate the mode of reporting. The available options are: • Batch • Online	Yes
Email ID	Used to configure Email ID. This is enabled only in case of **Batch** mode.	No
Subject	Used to configure Email subject line.	No
Email Body Content	Used to configure content of Email body.	No

Sequence	Used to define sequence of parameters. E.g.: 10,20, etc.	No
Report Parameter	Used to define report parameters.	No
Report Parameter Navigation	Used to define Parameters navigation option.	No

Details of Spot Algorithm are as given below:

Field	Description
Algorithm Spot	ReportDataExtractAlgorithmSpot
Description	This algorithm spot allows you to create custom data extract, which is used to create PDF files. Additionally, using this spot, you can create XML, DOC, CSV, XLS Reports. It is Implementation Team's responsibility to call FOP and POI API to generate respective reports. Following parameters used in algorithm: • reportParameters • ReportCode • reportOutptFormat • ReportTemplate • ReportTypeTemplate • ReportMode • ScriptCode

2.2.6 Report Generation

User can generate the report using Report Generation Menu. User can generate the report by following below steps:

1. To Generate report, go to Admin->R->select Report Generation
2. Select **Generate** to generate report as shown below:

Figure 15: Report Definition Page

2.2.7 Batch Job

By using this feature, you can create multiple reports at same time. To create batch report we can follow below steps:

1. Go to menu. Select Tools->Batch Job Submission->Add
2. When you select Add button, the below screen appears. Select BATCH JOB ID and provide required details:

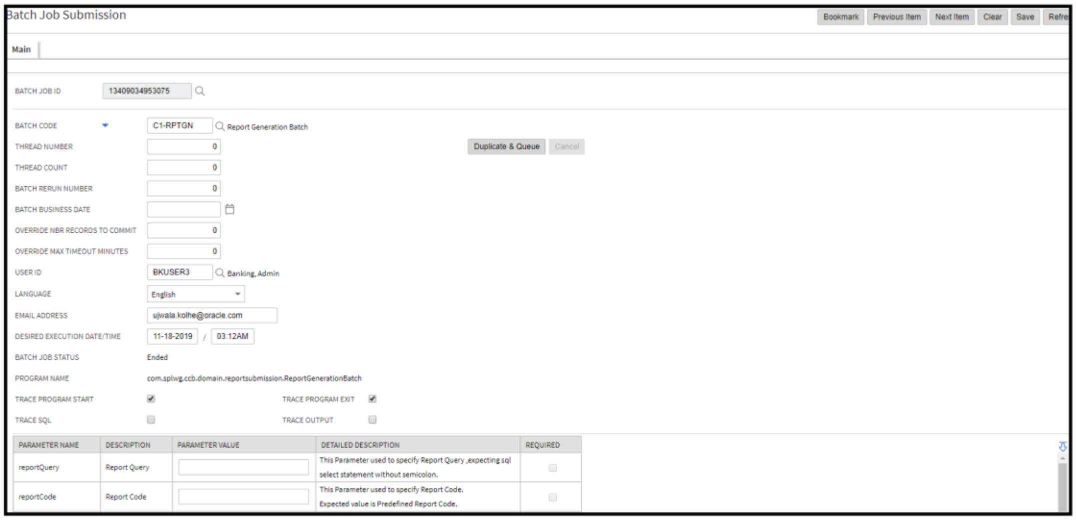

Figure 16: Batch Job

3. Batch Job appears with the following parameters:

Field Name	Field Description	Mandatory (Yes or No)
Batch Job ID	Used to specify Job ID for Job	No
Batch Code	Used to specify Batch Code	No
Thread Number	Used to specify how many threads user wants to execute	Yes
Batch Rerun Number	User has to select rerun number	Yes
Batch Business Date	User has to provide business date for Job	No
OVERRIDE NBR RECORDS TO COMMIT	User needs to provide override number of commits	Yes
OVERRIDE MAX TIMEOUT MINUTES	User needs to provide maximum override timeout minutes	No
USER ID	User has to provide his ID	Yes

LANGUAGE	Used to specify language from dropdown.	No
EMAIL ADDRESS	Used to specify email ID to whom report needs to deliver. This email ID should be same as person's email ID.	No
DESIRED EXECUTION DATE/TIME	Desire time for batch execution.	No
BATCH JOB STATUS	This parameter will display status of Batch Job	No
PROGRAM NAME	This parameter will display program name	No
reportQuery	In this parameter user needs to provide query for which Bill IDs user needs to generate report.	No

4. When user can view Job status as Ended user can view reports.

2.2.8 Report Audit

We can track the record of generated reports through this feature of ORMB. By using this feature of reporting, we can download the report as well as we can check the error of the specific Report Code record. To view all reports, follow below steps:

1. Go to Admin-> R->Report Audit.
2. After selecting Report Audit following screen will appear:

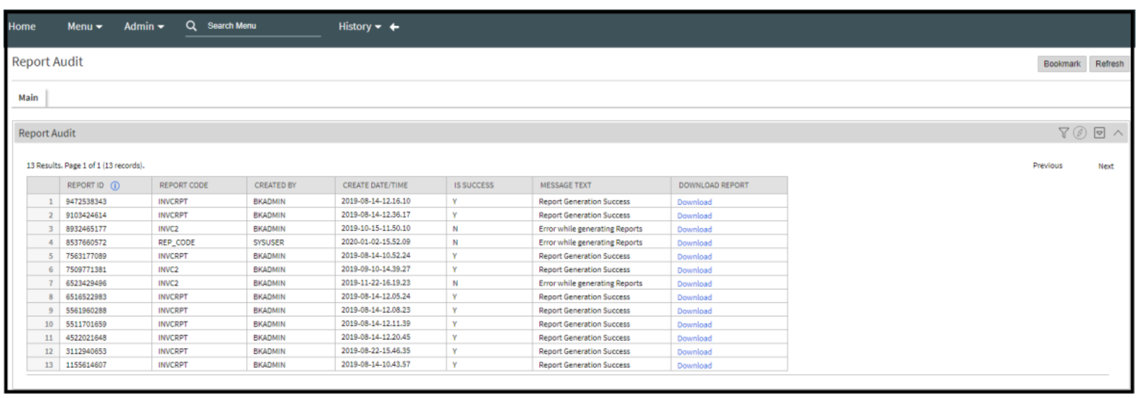

Figure 17: Report Audit Page

3. It will be having following parameters:

Field Name	Field Description
Report ID	This is unique ID
Report Code	This is report Code generated by user
Created Date/Time	Report creation date and time

Is Success	This parameter can have 2 values • Yes • No
Message TEXT	If IS success field is N then this parameter will have error description
DOWNLOAD REPORT	If Report generation is successful then we can download and view the report.

4. We can download and view the report in PDF format.

2.2.9 Email Configuration

User can configure Email using this menu. To Configure Email user has to follow below steps:

1. Go to Admin-> M->Master Configuration
2. After selecting Master Configuration following screen will appear:

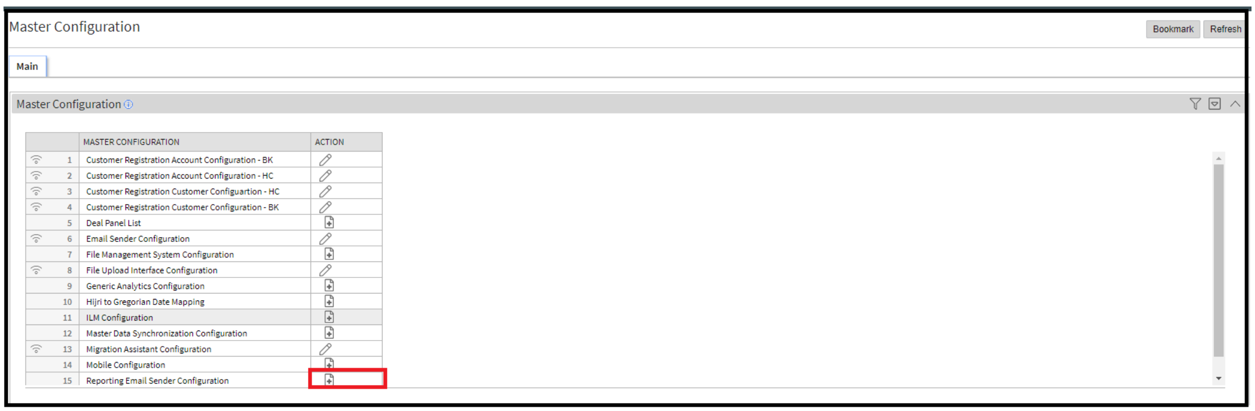

Figure 18: Master Configuration Page

3. Search for Reporting Email Sender Configuration and click on (+) Icon in action tab
4. After clicking on (+) icon following screen will appear:

Figure 19: Master Configuration Page

5. It has following parameters:

Field Name	Field Description
SMTP Host Name	SMTP Host name
SMTP PORT	SMTP Port number
USERNAME	Name of the User
password	Password for specific user ID
Secure Socket Layer	Secure Socket layer need to be checked if user want it to be used
TEST	User has to select this checkbox to provide email ID
FROM EMAIL ID	Sender's email ID
TO EMAIL ID	Receiver's Email ID(customer's email where reports needs to be send)

6. After entering all required details user can save these details.

Figure 20: Master Configuration Page

2.2.10 Develop an ORMB algorithm

To generate a PDF file using ORMB FOP Reporting, user needs to provide two inputs: FOP template and XML file.

In this section we will understand by using an ORMB algorithm how we can generate the XML file.

Write an algorithm or use existing one to generate XML file at given path (`<application installation directory>/ splapp/reporting/extractxml/file_name.xml`)

Note: Make sure your xml will get generate only on given path.

2.2.11 Call ORMB FOP framework API to generate PDF reports Bill and Letters

ORMB provides Business Component ‘FOPReportGenerationComponent_Impl’ to generate FOP reports. You must use this business component to call reporting API.

The API can be define as:

public String getFOPPdf(String trialBillId, String xslFIlePath, String pdfFilePath, String billExtractXmlPath, String outputHttpUrl)

This API has following parameters:

- **trialBillId** - Bill or Letter Id used to name the PDF
- **xslFIlePath** - defines FOP XSL file path. The path should be:<application installation directory>/ splapp/reporting/xsl /<BILL_ROUTY TYPE_CODE/LETTER_TEMPLATE_CODE>.xsl
- **pdfFilePath** - this path value must be fully qualified path of PDF generation which must be: <application installation directory>/ splapp/reporting/output/<any name/letter_id/bill_id>.pdf
- **billExtractXmlPath**- this path value must be fully qualified path of xml generated by algorithm which must be: <application installation directory>/ splapp/reporting/extractxml/<generated xml name>.xml
- **outputHttpUrl** - this parameter value can be <applicationURL>/billView or null. For example, https://mum00bwc.in.oracle.com:7601/ouaf/billView/

The Pseudo Code to call **getFOPPdf ()** component method used to generate PDF file is:

```
FOPReportGenerationComponent_Impl fopReportGenerationComponent = new
FOPReportGenerationComponent_Impl ();

fopReportGenerationComponent.getFOPPdf(billId, xslFIlePath,
pdfFilePath, billExtractXmlPath, outputHttpUrl);
```


3. ORMB FOP framework Using Groovy

ORMB FOP framework allows you generate reports in Apache Groovy. You can use ORMB FOP framework to edit existing bill and letter template or to create new PDF report. You can initiate various processes using Groovy. The processes can be listed as:

- **Report Generation On Person Context Menu:**

  For detailed information, refer to Oracle Revenue Management and Billing Reporting SDK Guide 3.2.8.1 point.

- **Custom Letter Using SS and Groovy:**

  For detailed information, refer to Oracle Revenue Management and Billing Reporting SDK Guide 3.2.8.2 point.

- **New Letter Using BS:**

  For detailed information, refer to Oracle Revenue Management and Billing Reporting SDK Guide 3.2.8.4 point.

- **New Letter Using Groovy:**

  For detailed information, refer to Oracle Revenue Management and Billing Reporting SDK Guide 3.2.8.3 point.