

Oracle® Revenue Management and Billing

Version 2.5.0.1.0

Information Lifecycle Management (ILM) Implementation Guide

Revision 1.0

E89206-01

August, 2017

Oracle Revenue Management and Billing Information Lifecycle Management (ILM) Implementation Guide

E89206-01

Copyright Notice

Copyright © 2017, Oracle and/or its affiliates. All rights reserved.

Trademark Notice

Oracle, Java, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

License Restrictions Warranty/Consequential Damages Disclaimer

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure, and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or de-compilation of this software, unless required by law for interoperability, is prohibited.

Warranty Disclaimer

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

Restricted Rights Notice

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Oracle programs, including any operating system, integrated software, any programs installed on the hardware, documentation, and/or technical data delivered to U.S. Government end users are “commercial computer software” or “commercial technical data” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, documentation, and/or technical data shall be subject to license terms and restrictions as mentioned in Oracle License Agreement, and to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). No other rights are granted to the U.S. Government.

Hazardous Applications Notice

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Third Party Content, Products, and Services Disclaimer

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products, or services.

Preface

About This Document

This document provides an overview of the Information Lifecycle Management (ILM) feature. It describes how to implement ILM for the Transaction Feed Management (TFM) and Billing modules.

Note: The ILM implementation is certified on Oracle Revenue Management and Billing Version 2.5.0.1.0 which is based on Oracle Utilities Application Framework Version 4.3.0.1.0.

Intended Audience

This document is intended for the following audience:

- End-Users
- Consulting Team
- Implementation Team

Organization of the Document

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

Section No.	Section Name	Description
Section 1	Information Lifecycle Management (ILM) Overview	Provides an overview of the Information Lifecycle Management (ILM) feature.
Section 2	ILM Implementation Overview	Provides high-level information about how to implement ILM in Oracle Revenue Management Billing.
Section 3	Scope of ILM Implementation	Lists the maintenance objects and modules for which ILM is implemented.
Section 4	ILM-Specific Option Types Available for Maintenance Object	Lists and describes the ILM-specific option types available for each maintenance object.
Section 5	ILM Implementation	Explains how to implement ILM for the TFM and Billing modules.
Section 6	ILM Batches	Lists and describes batches which are newly added to implement ILM for the TFM and Billing modules.
Section 7	Eligible Table Partitions for Archival	Explains how to view the table partitions which are eligible for archival.
Section 8	Drop Eligible Table Partitions	Explains how to drop an eligible table partition.
Section 9	Additional Tasks After Dropping Table Partitions	Lists and describes additional tasks that you need to perform after dropping eligible table partitions.

Related Documents

You can refer to the following documents for more information:

Document	Description
<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.

Contents

1. Information Lifecycle Management (ILM) Overview	1
2. ILM Implementation Overview	6
3. Scope of ILM Implementation	7
4. ILM-Specific Option Types Available for Maintenance Object	8
5. ILM Implementation	10
5.1 Applying the 26659570 Patch	10
5.1.1 Applying the 26659570 Patch on the Database	12
5.1.2 Applying the 26659570 Patch on the Application Environment	13
5.2 Executing the Sample Table Partitioning Scripts	14
5.3 Setting the Retention Period in the Application	18
5.3.1 Setting the Default Retention Period	18
5.3.2 Setting the Retention Period for a Maintenance Object	19
6. ILM Batches	20
6.1 ILM Crawler Initiator (F1-ILMIN)	20
6.2 ILM Crawler - Adjustments (C1-ADCRL)	20
6.3 ILM Crawler - Bill and Bill Segments (C1-BLCRL)	22
6.4 ILM Crawler - Billable Charges (C1-BCCRL)	24
6.5 ILM Crawler - Transaction Feed Management (C1-FMCRL)	25
6.6 ILM Crawler - TFM Daily Rating Transaction Calculations (C1-TCCRL)	27
7. Eligible Table Partitions for Archival	29
8. Drop Eligible Table Partitions	30
9. Additional Tasks After Dropping Table Partitions	31
9.1 Rebuilding the Global Indexes	31
9.2 Generating the Database Statistics	31

1. Information Lifecycle Management (ILM) Overview

Information Lifecycle Management (ILM) is a methodology designed to address data management issues. Old data starts becoming an overhead to the overall application not only in terms of storage, but also in terms of performance. This older data, which has completed its lifecycle, can be possibly removed from the system to make an overall savings in terms of cost and performance. The archival implementation need to ensure that referential integrity of the overall system is maintained. Archiving keeps the volume of data in the production database at a manageable level without compromising the system's ability to perform normal operations.

The Information Lifecycle Management (ILM) includes the following three processes:

1. **Setup** - The setup process is all about how you implement the ILM feature. The following figure indicates the different steps that you need to perform to implement the ILM feature:

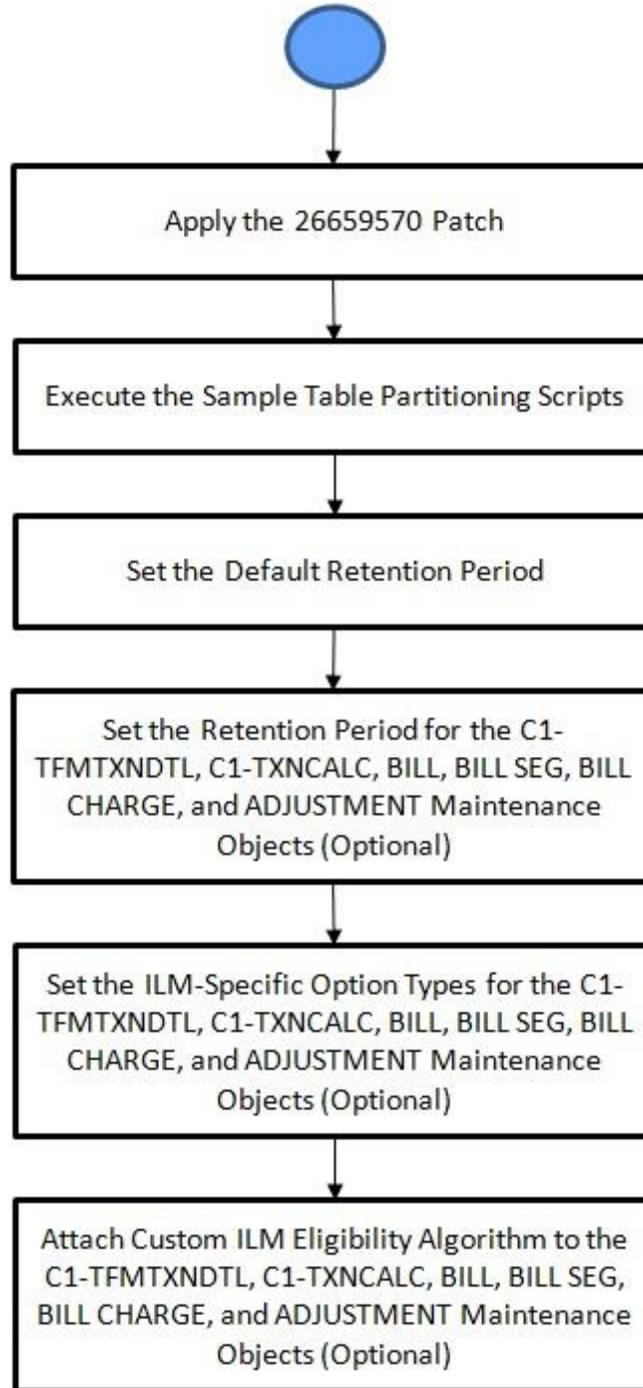


Figure 1: ILM Setup Process

2. **Execution** - The Execution process is a process where you execute the ILM batches to identify and mark the records which are eligible for archival. You can either execute the required ILM Crawler batch (i.e. **C1-ADCRL**, **C1-BLCRL**, **C1-BCCRL**, **C1-TCCRL**, or **C1-FMCRL**) or just execute the **ILM Crawler Initiator (F1-ILMIN)** batch. The following figure indicates how the ILM Crawler batch identifies and marks the records which are eligible for archival:

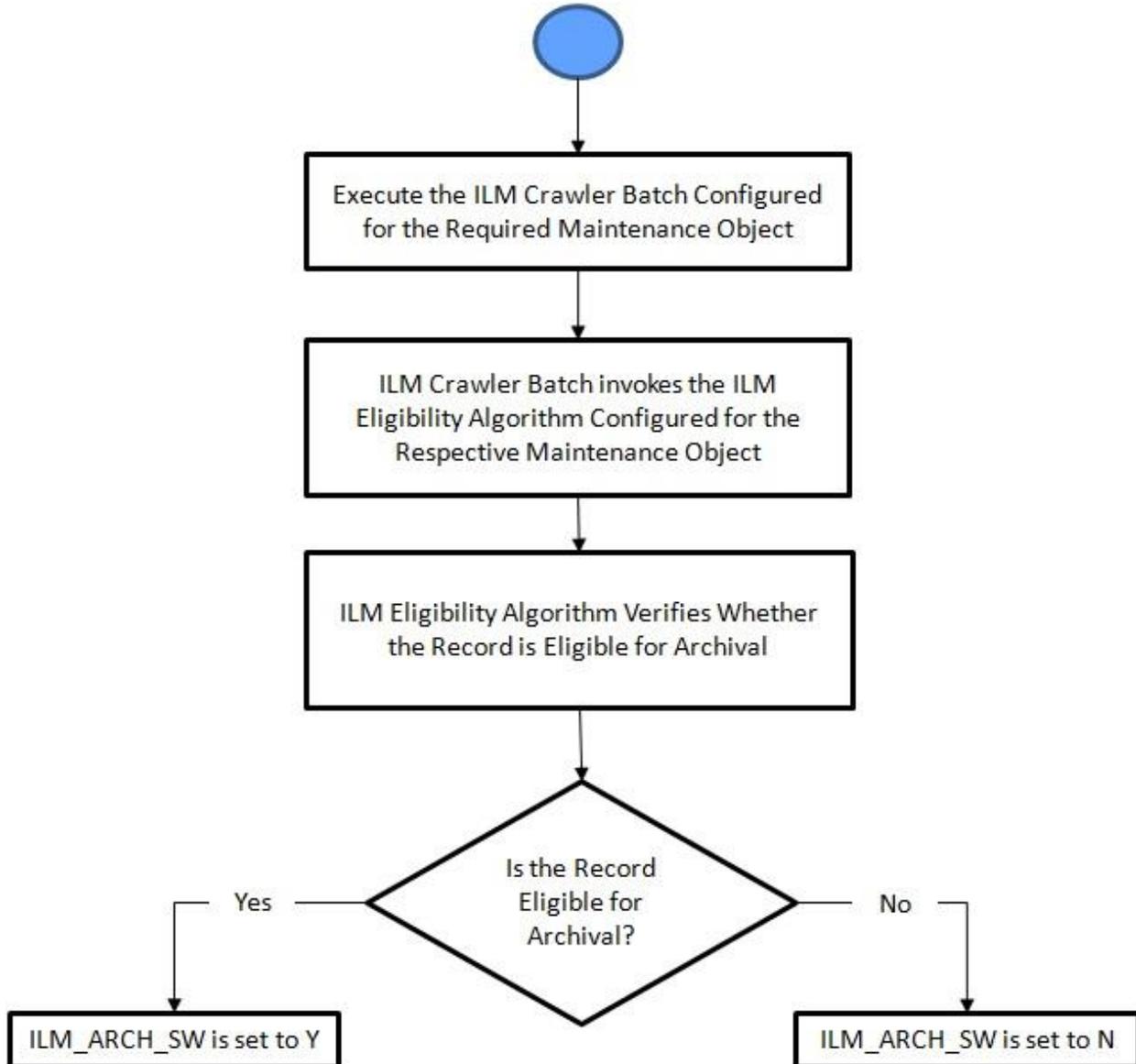


Figure 2: ILM Crawler Batch Execution Process

The following figure indicates how the ILM Crawler Initiator batch identifies and marks the records which are eligible for archival:

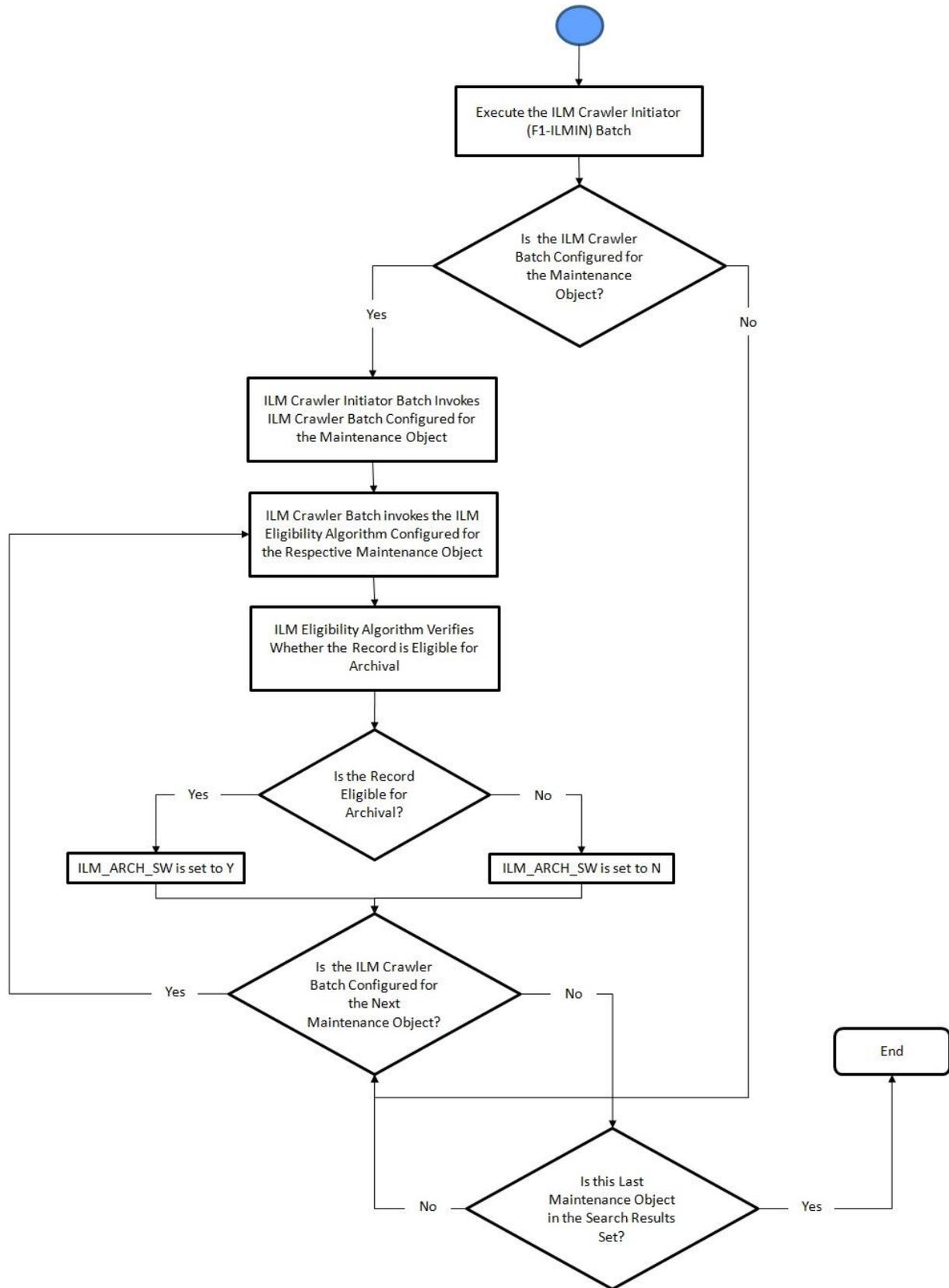


Figure 3: ILM Crawler Initiator Batch Execution Process

3. **Maintenance** - The Maintenance process is a process where you archive and then drop the table partitions where all records are eligible for archival. The following figure indicates the steps involved in the maintenance process:

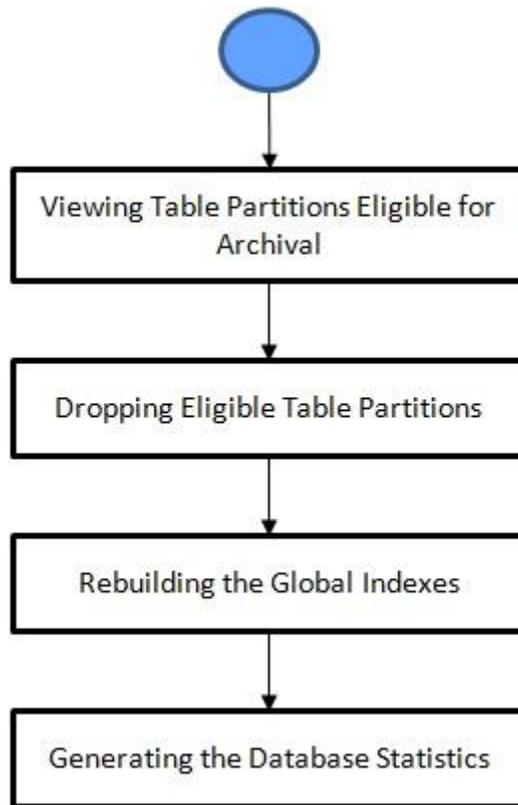


Figure 4: ILM Maintenance Process

2. ILM Implementation Overview

The ILM implementation requires configuration on both the application and database sides and table partitioning.

An underlying design principle of the ILM implementation is based on the concept that the age of the data may not only be used as a criterion to determine when a record must be archived. There may be business rules that dictate that some records are still current and must not be archived yet.

ILM enabled objects has two additional columns - ILM Date (ILM_DT) and ILM Archival Switch (ILM_ARCH_SW). The ILM date is used for partitioning to group data by age. The ILM Archival Switch is set by a background process when the record meets the business rules specific to the maintenance object and is eligible for archival. The ILM Archival Switch allows the database administrator to check whether all records in a partition meet the business criteria defined for archival. If the ILM Archival Switch is set to **Y** for all records, then the DBA can take the required steps to archive the partition.

3. Scope of ILM Implementation

At present, the ILM is implemented for the following maintenance objects:

- Transaction Detail (C1-TFMTXNDTL)
- Transaction Calculation Detail (C1-TXNCALC)
- Bill (BILL)
- Bill Segments (BILL SEG)
- Billable Charge (BILL CHARGE)
- Adjustment (ADJUSTMENT)

In other words, the out of box ILM implementation is provided for the Transaction Feed Management and Billing modules. If you want to implement ILM for any other maintenance object or module, you need to do the required configurations and write the custom logic to identify the records which are eligible for archival.

4. ILM-Specific Option Types Available for Maintenance Object

The following table lists the ILM-specific option types which you can define for each maintenance object:

Option Type	Description	Mandatory (Yes or No)
ILM Crawler Batch Control	<p>Used to specify the batch control that you want to use to identify and mark the records which are eligible for archival.</p> <p>Note: As we are supporting ILM implementation for the TFM and Billing modules, by default, the parameter value is defined for the C1-TFMTXNDTL, C1-TXNCALC, BILL, BILL CHARGE, and ADJUSTMENT maintenance objects.</p>	<p>Yes</p> <p>Note: This is required when you want to implement ILM for the maintenance object.</p>
ILM Retention Period In Days	<p>Used to specify the number of days for which you want to retain the records which are created using the business objects of the maintenance object.</p> <p>Note: This parameter value overrides the default retention period defined in the ILM master configuration.</p>	No
ILM Restrict By Status	<p>Used to indicate whether you want to verify and mark records which are in a particular status. The valid values are:</p> <ul style="list-style-type: none"> • Y • N <p>If you set this parameter value to Y, you can use either the ILM Restrict By BO Final Status or Status Field option type to filter the records based on the status.</p> <p>Note: By default, the parameter value is set to N.</p>	No
Status Field	Used to specify the field name (which is used to store the status) based on which you want to filter the records.	No
ILM Final Status Field Value	Used when you want to verify and mark the records which are in a particular status.	No

Option Type	Description	Mandatory (Yes or No)
ILM Restrict By BO Final Status	<p>Used to indicate whether you want to verify and mark the records which are in the status which is defined as final in the lifecycle of the business object. The valid values are:</p> <ul style="list-style-type: none">• Y• N <p>Note: By default, the parameter value is set to N.</p>	No

5. ILM Implementation

To implement ILM for the Transaction Feed Management and Billing modules, you need to do the following:

1. Apply the 26659570 Patch

Note: The V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch (Patch Number: 26659570) is an incremental rollup pack for ORMB Version 2.5.0.1.0. It also contains the ILM related patches which will be applied to implement the ILM feature for the TFM and Billing modules.

2. Execute the Sample Table Partitioning Scripts
3. Set the Retention Period in the Application

5.1 Applying the 26659570 Patch

To implement ILM for the Transaction Feed Management and Billing modules, you need to apply the V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch (Patch Number: 26659570). On applying the ILM related patches, it does the following:

- Adds the following batches and configures the batch against the **ILM Crawler Batch Control** option type in the respective maintenance object:

Batch Name	Description	Maintenance Object
C1-FMCRL	ILM Crawler - Transaction Feed Management	C1-TFMTXNDTL
C1-TCCRL	ILM Crawler - TFM Daily Rating Transaction Calculations	C1-TXNCALC
C1-BLCRL	ILM Crawler - Bill and Bill Segments	BILL
C1-BCCRL	ILM Crawler - Billable Charges	BILL CHARGE
C1-ADCRL	ILM Crawler - Adjustments	ADJUSTMENT

- Adds the following algorithms and attaches the algorithm against the **ILM Eligibility** system event in the respective maintenance object:

Algorithm	Description	Maintenance Object
C1-FMILMELIG	ILM Eligibility Algorithm for TFM Transactions	C1-TFMTXNDTL
C1-TCILMELIG	ILM Eligibility Algorithm for TFM Transaction Calc Lines	C1-TXNCALC
C1-BLILMELIG	ILM Eligibility Algorithm for Bills and Bill Segments	BILL
C1-BCILMELIG	ILM Eligibility Algorithm for Billable Charges	BILL CHARGE
C1-ADILMELIG	ILM Eligibility Algorithm for Adjustments	ADJUSTMENT

- Adds a new table named CI_TXN_CALC_K and copies all unique TXN_CALC_ID from the CI_TXN_CALC table to the CI_TXN_CALC_K table.

- Adds the following columns and sets their column value:

Table Name	Column Name	Data Type	Column Value
CI_TXN_DETAIL	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_DTL_PRITM	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_ROLLBACK_TXN_DETAIL	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_DETAIL_EXCP	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_CALC	ILM_DT	DATE	The column value is set to the value defined in the END_DT column. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_SQ	ILM_DT	DATE	The column value is set to the value defined in the END_DT column of the CI_TXN_CALC table. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_CALC_LN	ILM_DT	DATE	The column value is set to the value defined in the END_DT column of the CI_TXN_CALC table. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_TXN_CALC_LN_CHAR	ILM_DT	DATE	The column value is set to the value defined in the END_DT column of the CI_TXN_CALC table. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_BILL	ILM_DT	DATE	The column value is set to the value defined in the BILL_DT column. If the value does not exist in the BILL_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .

Table Name	Column Name	Data Type	Column Value
CI_BSEG	ILM_DT	DATE	The column value is set to the value defined in the END_DT column. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_ADJ	ILM_DT	DATE	The column value is set to the value defined in the CRE_DT column. If the value does not exist in the CRE_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .
CI_BILL_CHG	ILM_DT	DATE	The column value is set to the value defined in the END_DT column. If the value does not exist in the END_DT column, the current date is set in the ILM_DT column.
	ILM_ARCH_SW	CHAR(1)	The column value is set to N .

5.1.1 Applying the 26659570 Patch on the Database

To apply the V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch on the database:

1. Download the V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch (Patch Number: 26659570) from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file in your local folder. The contents include three files - README.txt, MultiPlatform.zip, and Bug_26659570_Product_Fix_Design.pdf.
3. Unzip the MultiPlatform.zip file in your local folder. The contents include the V2.5.0.1.0-26659570_MultiPlatform folder.
4. Change to the V2.5.0.1.0-26659570_MultiPlatform folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER>/V2.5.0.1.0-26659570_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER>\V2.5.0.1.0-26659570_MultiPlatform
```

Note: The <DESTINATION_FOLDER> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

The contents include a file named CCB.V2.5.0.1.0-26659570.jar and a folder named database.

5. Change to the Oracle folder using the following command:

Linux:

```
cd database/ORACLE
```

Windows:

```
cd database\ORACLE
```

The contents include a zip file named CDXPatch.

6. Unzip the CDXPatch file using the following command:

Linux:

```
unzip CDXPatch.zip -d <PATH>/<DESTINATION_FOLDER_1>
```

Windows:

```
unzip CDXPatch.zip -d <PATH>\<DESTINATION_FOLDER_1>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include multiple folders and a utility named ouafDatabasePatch.

7. Execute the ouafDatabasePatch utility using the following command:

Linux:

```
ouafDatabasePatch.sh
```

Windows:

```
ouafDatabasePatch.cmd
```

5.1.2 Applying the 26659570 Patch on the Application Environment

To apply the V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch on the application environment:

1. Download the V2.5.0.1.0 INCREMENTAL ROLL UP PACK POST BUG 23227071 ROLLUP patch (Patch Number: 26659570) from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file in your local folder. The contents include three files - README.txt, MultiPlatform.zip, and Bug_26659570_Product_Fix_Design.pdf.
3. Unzip the MultiPlatform.zip file in your local folder. The contents include the V2.5.0.1.0-26659570_MultiPlatform folder.
4. Change to the V2.5.0.1.0-26659570_MultiPlatform folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_1>/V2.5.0.1.0-26659570_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER_1>\V2.5.0.1.0-26659570_MultiPlatform
```

Note: The <DESTINATION_FOLDER_1> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

The contents include a file named `CCB.V2.5.0.1.0-26659570.jar` and a folder named `database`.

- Decompress the `CCB.V2.5.0.1.0-26659570.jar` file using the following command:

```
jar -xvf CCB.V2.5.0.1.0-26659570.jar
```

The contents include two folders - `META-INF` and `CCB.V2.5.0.1.0-26659570`.

- Initialize the application environment (on which you want to apply the patch) using the following command:

Linux:

```
$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
```

Windows:

```
%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
```

Where,

`$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed and `$SPLENVIRON` or `%SPLENVIRON%` is the name of the application environment.

- Change to the `CCB.V2.5.0.1.0-26659570` folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_1>/V2.5.0.1.0-26659570_MultiPlatform/CCB.V2.5.0.1.0-26659570
```

Windows:

```
cd <DESTINATION_FOLDER_1>\V2.5.0.1.0-26659570_MultiPlatform\CCB.V2.5.0.1.0-26659570
```

- Install the patch using the following command:

Linux:

```
./installSF.sh
```

Windows:

```
installSF.cmd
```

5.2 Executing the Sample Table Partitioning Scripts

Once you apply the 26659570 patch, you need to partition the master and child tables in such a way that referential integrity is not hampered. Partitioning is mandatory for ILM implementation. This helps to segregate the data into multiple table partitions. There are many partitioning strategies which can be used to partition tables. However, we recommend you to partition the TFM and Billing related tables using the following partition type and keys:

Table Name	Partition Type	Partition Key	Sub-Partition Key
CI_TXN_DETAIL	Range	CURR_SYS_PRCS_DT	-
CI_ROLLBACK_TXN_DETAIL	Range	CURR_SYS_PRCS_DT	-
CI_TXN_DETAIL_EXCP	Range	CURR_SYS_PRCS_DT	-

Table Name	Partition Type	Partition Key	Sub-Partition Key
CI_TXN_DTL_PRITM	Range	CURR_SYS_PRCES_DT	-
CI_TXN_CALC	Range	ILM_DT	-
CI_TXN_CALC_LN	Range	ILM_DT	-
CI_TXN_CALC_LN_CHAR	Range	ILM_DT	-
CI_TXN_SQ	Range	ILM_DT	-
CI_BILL	Range	ILM_DT	BILL_ID
CI_BILL_CHAR	Reference	ILM_DT	BILL_ID
CI_BILL_EXCP	Reference	ILM_DT	BILL_ID
CI_BILL_MSG_PRM	Reference	ILM_DT	BILL_ID
CI_BILL_ROUTING	Reference	ILM_DT	BILL_ID
CI_BILL_SA	Reference	ILM_DT	BILL_ID
CI_BILL_ACH	Reference	ILM_DT	BILL_ID
CI_BILL_MSGS	Reference	ILM_DT	BILL_ID
CI_BILL_LOG	Reference	ILM_DT	BILL_ID
CI_BSEG	Range	ILM_DT	BSEG_ID
CI_BSEG_CALC	Reference	ILM_DT	BSEG_ID
CI_BSEG_CALC_LN	Reference	ILM_DT	BSEG_ID
CI_BSEG_CL_CHAR	Reference	ILM_DT	BSEG_ID
CI_BSEG_EXCP	Reference	ILM_DT	BSEG_ID
CI_BSEG_EXT	Reference	ILM_DT	BSEG_ID
CI_BSEG_ITEM	Reference	ILM_DT	BSEG_ID
CI_BSEG_MSG	Reference	ILM_DT	BSEG_ID
CI_BSEG_READ	Reference	ILM_DT	BSEG_ID
CI_BSEG_SQ	Reference	ILM_DT	BSEG_ID
CI_BILL_CHG	Range	ILM_DT	BILLABLE_CHG_ID
CI_BCHG_READ	Reference	ILM_DT	BILLABLE_CHG_ID
CI_BCHG_SQ	Reference	ILM_DT	BILLABLE_CHG_ID
CI_BILL_CHG_CHAR	Reference	ILM_DT	BILLABLE_CHG_ID
CI_B_CHG_LINE	Reference	ILM_DT	BILLABLE_CHG_ID
CI_B_LN_CHAR	Reference	ILM_DT	BILLABLE_CHG_ID
CI_ADJ	Range	ILM_DT	ADJ_ID

Table Name	Partition Type	Partition Key	Sub-Partition Key
CI_ADJ_APREQ	Reference	ILM_DT	ADJ_ID
CI_ADJ_CALC_LN	Reference	ILM_DT	ADJ_ID
CI_ADJ_CHAR	Reference	ILM_DT	ADJ_ID
CI_ADJ_CL_CHAR	Reference	ILM_DT	ADJ_ID

An out of box table partitioning scripts for ILM implementation are provided by Oracle Revenue Management and Billing for 2.5.0.1.0 release. To download the sample table partitioning scripts:

1. Download the ILM SAMPLE SQL PARTITIONING SCRIPTS FOR ORMB 2.5.0.1.0 patch (Patch Number: 26625153) from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file in your local folder. The contents include two folders:
 - TFM – Contains the scripts for partitioning the Transaction Feed Management (TFM) related tables.
 - Billing – Contains the scripts for partitioning the Billing related tables.

To partition the TFM related tables using the sample partitioning scripts:

1. Change to the TFM folder using the following command:

```
cd <DESTINATION_FOLDER_2>\TFM
```

Note: The <DESTINATION_FOLDER_2> folder is the location where you have extracted the contents of the downloaded file.

The contents include multiple SQL files.

2. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
3. Execute the following SQL query from the TFM folder:

```
tfm_ilm_migration_with_partitioning.sql
```

The execution logs are generated in the TFM folder which you can use for verification.

To partition the Billing related tables using the sample partitioning scripts:

1. Change to the Billing folder using the following command:

```
cd <DESTINATION_FOLDER_2>\Billing
```

Note: The <DESTINATION_FOLDER_2> folder is the location where you have extracted the contents of the downloaded file.

The contents include multiple SQL files.

2. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
3. Execute the following SQL query from the Billing folder:

```
billing_ilm_migration.sql
```

The execution logs are generated in the Billing folder which you can use for verification.

Once you execute the sample table partitioning scripts, the tables would be partitioned as shown in the following figure:

Module	Table name	Child table name	Partition type	Partition key	Sub Partition Key
TFM	CI_TXN_DETAIL		RANGE (DATE INTERVAL)	CURR_SYS_PRCES_DT	
TFM	CI_TXN_DTL_PRITM		RANGE (DATE INTERVAL)	CURR_SYS_PRCES_DT	
TFM	CI_ROLLBACK_TXN_DETAIL		RANGE (DATE INTERVAL)	CURR_SYS_PRCES_DT	
TFM	CI_TXN_DETAIL_EXCP		RANGE (DATE INTERVAL)	CURR_SYS_PRCES_DT	
TFM	CI_TXN_CALC		RANGE (DATE INTERVAL)	ILM_DT	
TFM	CI_TXN_SQ		RANGE (DATE INTERVAL)	ILM_DT	
TFM	CI_TXN_CALC_LN		RANGE (DATE INTERVAL)	ILM_DT	
TFM	CI_TXN_CALC_LN_CHAR		RANGE (DATE INTERVAL)	ILM_DT	
BILLING	CI_BILL		RANGE (DATE INTERVAL)	ILM_DT	BILL_ID
BILLING		CI_BILL_CHAR	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_EXCP	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_MSG_PRM	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_ROUTING	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_SA	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_ACH	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_MSGS	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING		CI_BILL_LOG	REFERENCE (Key : BILL_ID)	ILM_DT	BILL_ID
BILLING	CI_BSEG		RANGE (DATE INTERVAL)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_CALC	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_CALC_LN	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_CL_CHAR	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_EXCP	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_ITEM	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_MSG	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_READ	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_SQ	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING		CI_BSEG_EXT	REFERENCE (Key : BSEG_ID)	ILM_DT	BSEG_ID
BILLING	CI_ADJ		RANGE (DATE INTERVAL)	ILM_DT	ADJ_ID
BILLING		CI_ADJ_APREQ	REFERENCE (Key : ADJ_ID)	ILM_DT	ADJ_ID
BILLING		CI_ADJ_CALC_LN	REFERENCE (Key : ADJ_ID)	ILM_DT	ADJ_ID
BILLING		CI_ADJ_CHAR	REFERENCE (Key : ADJ_ID)	ILM_DT	ADJ_ID
BILLING		CI_ADJ_CL_CHAR	REFERENCE (Key : ADJ_ID)	ILM_DT	ADJ_ID
BILLING	CI_BILL_CHG		RANGE (DATE INTERVAL)	ILM_DT	BILLABLE_CHG_ID
BILLING		CI_BCHG_READ	REFERENCE (Key : BILLABLE_CHG_ID)	ILM_DT	BILLABLE_CHG_ID
BILLING		CI_BCHG_SQ	REFERENCE (Key : BILLABLE_CHG_ID)	ILM_DT	BILLABLE_CHG_ID
BILLING		CI_BILL_CHG_CHAR	REFERENCE (Key : BILLABLE_CHG_ID)	ILM_DT	BILLABLE_CHG_ID
BILLING		CI_B_CHG_LINE	REFERENCE (Key : BILLABLE_CHG_ID)	ILM_DT	BILLABLE_CHG_ID
BILLING		CI_B_LN_CHAR	REFERENCE (Key : BILLABLE_CHG_ID)	ILM_DT	BILLABLE_CHG_ID

The range interval of each partition for a table could vary as per the client's volume. For example, the Transaction Feed Management (TFM) related tables can have one partition per day, whereas the Billing related tables can have one partition per month. This range interval is used for partitioning tables in the sample table partitioning scripts.

If you want to change the range interval (i.e. to daily, monthly or quarterly), you need to accordingly modify the sample table partitioning scripts. You need to ensure that the range interval is same for all tables highlighted in the same color (as shown in the above figure). For example, you must use the same range interval for the CI_TXN_DETAIL, CI_ROLLBACK_TXN_DETAIL, CI_TXN_DETAIL_EXCP, and CI_TXN_DTL_PRITM tables. However, this range interval may vary from the range interval which is defined for CI_TXN_CALC, CI_TXN_CALC_LN, CI_TXN_CALC_LN_CHAR, and CI_TXN_SQ tables or for the CI_BILL, CI_BSEG, CI_BILL_CHG, and CI_ADJ tables.

The partitioning key for any table where the **Owner** flag is set to **Base** should not be changed in any case as it will violate the support from ORMB team.

5.3 Setting the Retention Period in the Application

The retention period is the number of days you want to retain the data in the application. The system enables you to define the default retention period through the ILM master configuration. This default retention period is applicable for all maintenance objects which are defined in the system. Alternatively, you can define the retention period for each maintenance object. It will override the default retention period defined in the ILM master configuration.

5.3.1 Setting the Default Retention Period

To set the default retention period through the ILM master configuration:

1. Login to Oracle Revenue Management and Billing Version 2.5.0.1.0.
2. Click the **Admin** link in the **Application** toolbar. A list appears.
3. From the **Admin** menu, select **M** and then click **Master Configuration**. The **Master Configuration** screen appears.
4. In the **Master Configuration** zone, click the **Edit**  icon corresponding to the ILM Configuration whose details you want to edit. The **ILM Configuration** screen appears. It contains the following section:
 - **Main** – Used to specify details for the ILM configuration.

The **Main** section contains the following fields:

Field Name	Field Description	Mandatory (Yes or No)
Business Object	Indicates the business object using which the ILM master configuration is created.	Not applicable
Default Retention Period	Used to specify the number of days you want to retain the data in the application.	Yes

Tip: Alternatively, you can click the **Edit** button in the **Master Configuration Details** zone to edit the ILM configuration.

5. Enter the default retention period in days.
6. Click **Save**. The changes made to the ILM configuration are saved.

5.3.2 Setting the Retention Period for a Maintenance Object

To set the retention period for a maintenance object:

1. Login to Oracle Revenue Management and Billing Version 2.5.0.1.0.
2. Click the **Admin** link in the **Application** toolbar. A list appears.
3. From the **Admin** menu, select **M** and then click **Maintenance Object**. A sub-menu appears.
4. Click the **Search** option from the **Maintenance Object** sub-menu. The **Maintenance Object Search** window appears.
5. Enter the required search criteria in the **Maintenance Object Search** window.

Note:

You must specify at least one search criterion while searching for a maintenance object.

ORMB search engine supports wildcard search, where you can substitute the percentage (%) symbol as a stand in for any word or letter in a search criteria. You can use the ‘%’ wildcard character in all input fields except the date fields. The ‘%’ wildcard character is suffixed automatically at the end of the partial search criteria. Therefore, you may or may not specify the wildcard character at the end of the partial search criteria. However, you have to prefix the wildcard character manually wherever required.

6. Click the **Search** button corresponding to the field in which you have specified the criteria. A list of maintenance objects that meet the search criteria appears in the search results.
7. Select the required maintenance object from the list. The **Maintenance Object** screen appears.
8. Click the **Options** tab. The **Options** tab appears.
9. Click the **Add (+)** icon corresponding to an option type. A new row is added in the grid.
10. Select the **ILM Retention Period In Days** option from the **Option Type** list.
11. Enter the sequence number in the respective field.
12. Enter the number of days for which you want to retain the records, which are created using the business objects of the respective maintenance object, in the **Option Value** field.
13. Click **Save**. The changes made to the maintenance object are saved.

6. ILM Batches

The following batches are newly added to implement ILM for the Transaction Feed Management and Billing modules:

- ILM Crawler - Adjustments (C1-ADCRL)
- ILM Crawler - Bill and Bill Segments (C1-BLCRL)
- ILM Crawler - Billable Charges (C1-BCCRL)
- ILM Crawler - TFM Daily Rating Transaction Calculations (C1-TCCRL)
- ILM Crawler - Transaction Feed Management (C1-FMCRL)

You can execute the above mentioned each batch individually or just execute the **ILM Crawler Initiator (F1-ILMIN)** batch.

6.1 ILM Crawler Initiator (F1-ILMIN)

The **ILM Crawler Initiator (F1-ILMIN)** batch is used when you want to execute ILM Crawler batch for each maintenance object where the **ILM Crawler Batch Control** option type is defined. It executes the batch which is specified as the value for the **ILM Crawler Batch Control** option type.

This batch is a multi-threaded batch. The multi-threading is based on maintenance object and chunks for multi-threading are created based on alphabetical distribution of maintenance object.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler Initiator (F1-ILMIN)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, records which are eligible for archival are marked for each maintenance object where the **ILM Crawler Batch Control** option type is defined.

6.2 ILM Crawler - Adjustments (C1-ADCRL)

The **ILM Crawler - Adjustments (C1-ADCRL)** batch is used to identify and mark the adjustments which are eligible for archival. It treats the system date minus retention period as the cutoff date. It uses the retention period which is defined for the **ADJUSTMENT** maintenance object. If the retention period is not defined for the **ADJUSTMENT** maintenance object, it uses the default retention period defined in the ILM master configuration.

It considers those adjustments where the **ILM Archival** flag is set to **N** and ILM date is earlier than or equal to the cutoff date, and then executes the ILM eligibility algorithm for each such record. The ILM eligibility algorithm checks whether:

- The adjustment creation date is earlier than or equal to the cutoff date.
- The adjustment is in the **Frozen** status.
- The adjustment is not linked to a pay tender or statement.
- All financial transactions related to the adjustment are in the **Frozen** status.
- The GL Distribution Status of the adjustment financial transaction is set to **D** (i.e. Distributed).
- The Foreign Exchange Gain Loss Calculation Status of the adjustment financial transaction is not set to **N** or **NULL**.
- If the account for which the adjustment is created belongs a customer class where the **Open Item Accounting** option is selected, the adjustment financial transaction is linked to a match event which is in the **Balanced** status.

If any of the above conditions fail, the adjustment is not eligible for archival. It also checks whether the bill on which the adjustment is swept has ILM date earlier than the adjustment's ILM date. If so, the adjustment's ILM date is set to the Bill's ILM date. In addition, it checks whether the adjustment is associated to any transfer adjustment. If the adjustment is associated to a transfer adjustment, it also verifies whether the transfer adjustment is eligible for archival. If so, it marks both the adjustments as eligible for archival. However, if the transfer adjustment is not yet eligible for archival, it moves both the adjustments on the same table partition and marks them as not eligible for archival.

Note: The system enables you to add additional conditions which should be considered while verifying whether the records are eligible for archival. You can define a custom algorithm and attach it to the **ILM Eligibility** system event of the **ADJUSTMENT** maintenance object.

This batch is a multi-threaded batch. The multi-threading is based on adjustment ID and chunks for multi-threading are created based on numerical distribution of adjustment ID.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Maintenance Object	Yes	Used to indicate that you want to verify the adjustments which are created using the business objects of a particular maintenance object. Note: By default, the parameter value is set to ADJUSTMENT .

Parameter Name	Mandatory (Yes or No)	Description
Override Cutoff Date	No	Used when you want to override the calculated cutoff date (i.e. system date minus retention period). <div style="border: 1px solid black; padding: 5px;"> <p>Note: You must specify a date which is earlier than or equal to the calculated cutoff date. You must specify the date in the YYYY-MM-DD format.</p> </div>
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler - Adjustments (C1-ADCRL)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, the **ILM_ARCH_SW** column corresponding to the adjustments, which are eligible for archival, in the **CI_ADJ** table is set to **Y**.

6.3 ILM Crawler - Bill and Bill Segments (C1-BLCRL)

The **ILM Crawler - Bill and Bill Segments (C1-BLCRL)** batch is used to identify and mark the bills and their bill segments which are eligible for archival. It treats the system date minus retention period as the cutoff date. It uses the retention period which is defined for the **BILL** maintenance object. If the retention period is not defined for the **BILL** maintenance object, it uses the default retention period defined in the ILM master configuration.

It considers those bills where the **ILM Archival** flag is set to **N** and ILM date is earlier than or equal to the cutoff date, and then executes the ILM eligibility algorithm for each such bill. The ILM eligibility algorithm checks whether:

- The bill date is earlier than or equal to the cutoff date.
- The bill is in the **Complete** status.
- The bill is not a credit note bill or is not linked to a credit note bill.
- The bill is not linked to a statement.
- All financial transactions related to the bill and its bill segments are in the **Frozen** status.
- The GL Distribution Status of the bill and its bill segment financial transactions is set to **D** (i.e. Distributed)
- The Foreign Exchange Gain Loss Calculation Status of the bill and its bill segment financial transactions is not set to **N** or **NULL**.
- If the account for which the bill is created belongs a customer class where the **Open Item Accounting** option is selected, the bill and its bill segment financial transactions are linked to match events which are in the **Balanced** status.

- The Bill ID, Parent ID, and the Presentment Bill ID on the bill financial transaction are same.

If any of the above conditions fail, the bill and its bill segments are not eligible for archival. It also checks whether the end date of any billable charge which is swept on the bill is later than the cutoff date. If so, the bill's and bill segment's ILM date is set to the billable charge's ILM date.

Note: The system enables you to add additional conditions which should be considered while verifying whether the records are eligible for archival. You can define a custom algorithm and attach it to the **ILM Eligibility** system event of the **BILL** maintenance object.

This batch is a multi-threaded batch. The multi-threading is based on bill ID and chunks for multi-threading are created based on numerical distribution of bill ID.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Maintenance Object	Yes	Used to indicate that you want to verify the bills which are created using the business objects of a particular maintenance object. Note: By default, the parameter value is set to BILL .
Override Cutoff Date	No	Used when you want to override the calculated cutoff date (i.e. system date minus retention period). Note: You must specify a date which is earlier than or equal to the calculated cutoff date. You must specify the date in the YYYY-MM-DD format.
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler - Bill and Bill Segments (C1-BLCRL)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, the **ILM_ARCH_SW** column corresponding to the bills and their bill segments, which are eligible for archival, in the **CI_BILL** and **CI_BSEG** tables, respectively, is set to **Y**.

6.4 ILM Crawler - Billable Charges (C1-BCCRL)

The **ILM Crawler - Billable Charges (C1-BCCRL)** batch is used to identify and mark the billable charges which are eligible for archival. It treats the system date minus retention period as the cutoff date. It uses the retention period which is defined for the **BILL CHARGE** maintenance object. If the retention period is not defined for the **BILL CHARGE** maintenance object, it uses the default retention period defined in the ILM master configuration.

It considers those billable charges where the **ILM Archival** flag is set to **N** and ILM date is earlier than or equal to the cutoff date, and then executes the ILM eligibility algorithm for each such billable charge. The ILM eligibility algorithm checks whether:

- The billable charge end date is earlier than or equal to the cutoff date.
- The billable charge is in the **Canceled** status and the **Recurring** flag is set to **NULL**.
- If the billable charge is in the **Billable** status and the **Recurring** flag is set to **NULL**, there should be bill segments and financial transactions associated with the billable charge.
- The status of the corresponding bill segment is not **Error**.
- All financial transactions related to the corresponding bill segment are in the **Frozen** status.
- The GL Distribution Status of the corresponding bill segment financial transactions is set to **D** (i.e. Distributed)
- The Foreign Exchange Gain Loss Calculation Status of the corresponding bill segment financial transactions is not set to **N** or **NULL**.
- If the account for which the bill is created belongs a customer class where the **Open Item Accounting** option is selected, the corresponding bill segment financial transactions are linked to match events which are in the **Balanced** status.
- The Bill ID, Parent ID, and the Presentment Bill ID on the corresponding bill segment financial transaction are same.

If any of the above conditions fail, the billable charge is not eligible for archival. It also checks whether the billable charge end date is later than the cutoff date. If so, the billable charge's ILM date is set to the billable charge's end date.

Note: The system enables you to add additional conditions which should be considered while verifying whether the records are eligible for archival. You can define a custom algorithm and attach it to the **ILM Eligibility** system event of the **BILL CHARGE** maintenance object.

This batch is a multi-threaded batch. The multi-threading is based on billable charge ID and chunks for multi-threading are created based on numerical distribution of billable charge ID.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Maintenance Object	Yes	Used to indicate that you want to verify the billable charges which are created using the business objects of a particular maintenance object. Note: By default, the parameter value is set to BILL CHARGE .
Override Cutoff Date	No	Used when you want to override the calculated cutoff date (i.e. system date minus retention period). Note: You must specify a date which is earlier than or equal to the calculated cutoff date. You must specify the date in the YYYY-MM-DD format.
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler - Billable Charges (C1-BCCRL)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, the **ILM_ARCH_SW** column corresponding to the billable charges, which are eligible for archival, in the **CI_BILL_CHG** table is set to **Y**.

6.5 ILM Crawler - Transaction Feed Management (C1-FMCRL)

The **ILM Crawler - Transaction Feed Management (C1-FMCRL)** batch is used to identify and mark the transaction and its transaction legs which are eligible for archival. It treats the system date minus retention period as the cutoff date. It uses the retention period which is defined for the **C1-TFMTXNDTL** maintenance object. If the retention period is not defined for the **C1-TFMTXNDTL** maintenance object, it uses the default retention period defined in the ILM master configuration.

It considers those transactions where the **ILM Archival** flag is set to **N** and the current system processing date (CURR_SYS_PRCS_DT) is earlier than or equal to the cutoff date, and then executes the ILM eligibility algorithm for each such transaction. The ILM eligibility algorithm checks whether:

- The status of the transaction is **Invalid, Ignored, or Cancelled**.
- The status of the transaction is **Compete** and its transaction legs are either in the **Ignore** status or belong to a frozen bill segment.
- The status of the transaction and its transaction legs is **Error**.

If the above conditions fail, the transaction and its transaction legs are not eligible for archival.

Note: The system enables you to add additional conditions which should be considered while verifying whether the records are eligible for archival. You can define a custom algorithm and attach it to the **ILM Eligibility** system event of the **C1-TFMTXNDTL** maintenance object.

This batch is a multi-threaded batch. The multi-threading is based on transaction ID and chunks for multi-threading are created based on numerical distribution of transaction ID.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Maintenance Object	Yes	Used to indicate that you want to verify the transactions which are created using the business objects of a particular maintenance object. Note: By default, the parameter value is set to C1-TFMTXNDTL .
Override Cutoff Date	No	Used when you want to override the calculated cutoff date (i.e. system date minus retention period). Note: You must specify a date which is earlier than or equal to the calculated cutoff date. You must specify the date in the YYYY-MM-DD format.
Chunk Size	Yes	Used to specify the number of transactions you want to verify in each work unit. Note: By default, the parameter value is set to 500 .
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler - Transaction Feed Management (C1-FMCRL)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, the **ILM_ARCH_SW** column corresponding to the transactions, which are eligible for archival, in the **CI_TXN_DETAIL** table is set to **Y**.

6.6 ILM Crawler - TFM Daily Rating Transaction Calculations (C1-TCCRL)

The **ILM Crawler - TFM Daily Rating Transaction Calculations (C1-TCCRL)** batch is used to identify and mark the transaction leg calculation records which are eligible for archival. It treats the system date minus retention period as the cutoff date. It uses the retention period which is defined for the **C1-TXNCALC** maintenance object. If the retention period is not defined for the **C1-TXNCALC** maintenance object, it uses the default retention period defined in the ILM master configuration.

It considers those transaction leg calculation records where the **ILM Archival** flag is set to **N** and ILM date is earlier than or equal to the cutoff date, and then executes the ILM eligibility algorithm for each such transaction leg calculation record. The ILM eligibility algorithm checks whether:

- The **ILM Archival** flag of the corresponding transaction leg is set to **Y**.

If the above condition fails, the transaction leg calculation records are not eligible for archival.

Note: The system enables you to add additional conditions which should be considered while verifying whether the records are eligible for archival. You can define a custom algorithm and attach it to the **ILM Eligibility** system event of the **C1-TXNCALC** maintenance object.

This batch is a multi-threaded batch. The multi-threading is based on transaction calculation ID and chunks for multi-threading are created based on numerical distribution of transaction calculation ID.

You can specify the following parameters while executing this batch:

Parameter Name	Mandatory (Yes or No)	Description
Maintenance Object	Yes	Used to indicate that you want to verify the transaction leg calculation records which are created using the business objects of a particular maintenance object. Note: By default, the parameter value is set to C1-TXNCALC .
Override Cutoff Date	No	Used when you want to override the calculated cutoff date (i.e. system date minus retention period). Note: You must specify a date which is earlier than or equal to the calculated cutoff date. You must specify the date in the YYYY-MM-DD format.

Parameter Name	Mandatory (Yes or No)	Description
Chunk Size	Yes	Used to specify the number of transaction leg calculation records you want to verify in each work unit. Note: By default, the parameter value is set to 500.
Thread Pool Name	No	Used to specify the thread pool on which you want to execute the batch.

Note: If the **ILM Crawler - TFM Daily Rating Transaction Calculations (C1-TCRL)** batch fails or aborts due to some reason, you can restart the batch over and over again with the same set of parameters.

Post Execution Check/Clean Up:

On successful completion of this batch, the **ILM_ARCH_SW** column corresponding to the transaction leg calculation records, which are eligible for archival, in the **CI_TXN_CALC** table is set to **Y**.

7. Eligible Table Partitions for Archival

Once you execute the ILM Crawler batches, you can view the table partitions which are eligible for archival. A table partition is eligible for archival only when:

- All records in the table partition are eligible for archival.
- The high value of the table partition is earlier than or equal to the cutoff date.

To view the table partitions which are eligible for archival:

1. Login to Oracle Revenue Management and Billing Version 2.5.0.1.0.
2. Click the **Admin** link in the **Application** toolbar. A list appears.
3. From the **Admin** menu, select **I** and then click **ILM Archival**. The **ILM Archival** screen appears. It consists of the **Search** zone which allows you to search for the table partitions of a module which are eligible for archival. This zone contains the following fields:

Field Name	Field Description	Mandatory (Yes or No)
Module	Used when you want to search table partitions of a particular module which are eligible for archival. The valid values are: <ul style="list-style-type: none"> • Billing • Transaction Feed Management 	No
Cutoff Date	Used when you want to search table partitions whose high value date is earlier than or equal to the cutoff date.	Yes

4. Enter the required search criteria and then click **Search**. A list of table partitions which are eligible for archival appears in the search results. The **Search Results** section contains the following columns:

Column Name	Column Description
Table Name	Displays the parent table name.
Partition Name	Displays the name of the table partition.
High Value	Displays the upper boundary date for the range based table partition.
Eligible to Purge	Indicates whether the table partition is eligible for purging or dropping. The valid values are: <ul style="list-style-type: none"> • Y • N

8. Drop Eligible Table Partitions

Once you identify the table partitions which are eligible for dropping, you can drop the eligible table partitions. However, we recommend you to take a backup of the eligible table partitions before dropping them.

To drop an eligible table partition:

1. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
2. Execute the following command:

```
ALTER TABLE <TABLE_NAME> DROP PARTITION <PARTITION_NAME>
```

For example, ALTER TABLE CI_BSEG DROP PARTITION SYS_P0264

Note:

When a partition from the parent table is dropped, the corresponding partitions from the child tables are automatically dropped due to reference partitioning. For example, **CI_ADJ** is a parent table and **CI_ADJ_APREQ**, **CI_ADJ_CALC_LN**, **CI_ADJ_CHAR**, and **CI_ADJ_CL_CHAR** are its child tables. When you drop a partition from the **CI_ADJ** table, all corresponding partitions from all child tables are dropped, automatically.

While dropping the table partitions for the Billing module, ensure that all eligible table partitions on the **CI_BILL**, **CI_BSEG**, **CI_BILL_CHG**, and **CI_ADJ** tables are dropped together for a particular high value date.

This activity of dropping eligible table partitions should be taken up during off peak hours to avoid performance issues.

9. Additional Tasks After Dropping Table Partitions

Once you drop the eligible table partitions, you need to do the following:

1. Rebuild the Global Indexes
2. Generate the Database Statistics

9.1 Rebuilding the Global Indexes

You need to rebuild all global indexes of the tables whose partitions are dropped. To rebuild the global indexes:

1. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
2. Execute the following command:

```
select 'ALTER INDEX' || INDEX_NAME || 'REBUILD PARTITION' ||  
PARTITION_NAME || ';' from DBA_ind_partitions where status =  
'UNUSABLE' AND INDEX_OWNER = 'CISADM';
```

Note:

This activity of rebuilding global indexes should be taken up during off peak hours to avoid performance issues.

Adequate disk space must be allocated for redo logs as considerable amount of redo is expected to be generated during the index rebuild activity.

9.2 Generating the Database Statistics

You need to gather the statistics for all tables whose partitions are dropped and indexes are rebuilt. To generate the database statistics for individual table, use the following statement:

```
BEGIN
```

```
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',          TABNAME=>'<Table_Name>',  
GRANULARITY=>'ALL', CASCADE=>TRUE, METHOD_OPT=>'FOR ALL COLUMNS SIZE AUTO',  
DEGREE=>32);
```

```
END;
```