Product Release Note
Oracle FLEXCUBE Enterprise Limits and Collateral
Management
Release 14.0.0.0.0
[November] [2017]





Product Release Note [November] [2017] Version 14.0.0.0.0

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### 1. Release Notes

### 1.1 Background

Oracle FLEXCUBE Enterprise Limits and Collateral Management is an enterprise application that enables banks to manage their exposure by centralizing limits definition process and collateral management, and effectively managing the underlying documentation. It is a real-time, solution for exposure tracking, credit facility creation and renewal, collateral pooling and collateral valuation and is enabled for multi-currency, multi-entity, multi-instance operations. Built on SOA, Oracle FLEXCUBE Enterprise Limits and Collateral Management offers strong integration capability to coexist with the existing application landscape.

Oracle FLEXCUBE Enterprise Limits and Collateral Management 14.0.0.0.0 is enhanced on the Base Version of Oracle FLEXCUBE Enterprise Limits and Collateral Management 12.3.0.0.0.

## 1.2 Purpose

The purpose of this Release Note is to highlight the enhancements in Oracle FLEXCUBE Enterprise Limits and Collateral Management 14.0.0.0.0

## 1.3 **Abbreviations**

| Abbreviation | Description   |  |  |  |  |  |
|--------------|---|--|--|--|--|--|
| BC           | Bills and Collection  |  |  |  |  |  |
| BIP          | Business Intelligence Publisher   |  |  |  |  |  |
| BPEL         | Business Process Execution Language   |  |  |  |  |  |
| BPMN         | Business Process Execution Language  Business Process Management and Notation |  |  |  |  |  |
| CO           | Core Services   |  |  |  |  |  |
| CPG          |   |  |  |  |  |  |
|              | Common Payment Gateway  |  |  |  |  |  |
| EJB          | Enterprise Java Beans   |  |  |  |  |  |
| ELCM         | Oracle FLEXCUBE Enterprise Limits and Collateral Management                   |  |  |  |  |  |
| EOD          | End of Day  |  |  |  |  |  |
| LM           | Limits and Collaterals  |  |  |  |  |  |
| FCUBS        | Oracle FLEXCUBE Universal Banking   |  |  |  |  |  |
| FCY          | Foreign Currency  |  |  |  |  |  |
| IE           | Internet Explorer   |  |  |  |  |  |
| JDBC         | Java Database Connectivity  |  |  |  |  |  |
| JPA          | Java Persistence API  |  |  |  |  |  |
| LC           | Letter of Credit  |  |  |  |  |  |
| MM           | Money Market  |  |  |  |  |  |
| OBCL         | Oracle Banking Corporate Lending  |  |  |  |  |  |
| OD           | Over Draft  |  |  |  |  |  |
| ODT          | Oracle Development Tool   |  |  |  |  |  |
| OR           | Origination   |  |  |  |  |  |
| SMS          | Secure Management System  |  |  |  |  |  |
| SSO          | Single Sign On  |  |  |  |  |  |
| SQLJ         | A SQLJ program is a Java program containing embedded SQL                      |  |  |  |  |  |
|              | statements.   |  |  |  |  |  |
| UCM          | Universal Content Management  |  |  |  |  |  |
| UI           | User Interface  |  |  |  |  |  |



For module code and description details, please refer Annexure C.

### 1.4 Release Highlights

The scope of the current release Oracle FLEXCUBE Enterprise Limits and Collateral Management 14.0 is mainly focused following enhancements:

- ELCM Integration with FCUBS and OBCL
- Value Date Based Fee Processing
- Enhancements in Facilities Maintenance
- Remediation for SQLJ in 12R2

#### 1.4.1 ELCM Integration with FCUBS and OBCL

#### 1.4.1.1 Get LC Contract and Corporate Deposits to Link in Collateral

In this release, ELAccountService is invoked to capture Term, LC, BC and MM contract details. During collateral creation we will be able to links these term deposits or contracts. Post linkage to apply block we will invoke the below web services based on the module.

#### 1.4.1.2 ELCM Standalone Integration with FCUBS and OBCL: Co Deployed

In a co deployed system of UBS/OBCL and ELCM, the process flow between the systems happens through JPA layer. Gateway EJB bean will be invoked in the CO deployed system instead of the web service calls. Insulation layer will be calling the GatewayEJB of ELCM with same request xml.

#### 1.4.1.3 New Services for FCUBS Integration

Interface between FCUBS or OBCL to ELCM supports two modes:

- ELCM with SYNC Mode
- ELCM with ASYNC Mode

In ELCM Sync mode, a new adapter layer is created in FCUBS /OBCL system to interact with ELCM through web services. Adapter layer prepares the request based on the service log entry and invokes the web service of ELCM for further processing

In Async mode during contract creation, if a limit request is created, FCUBS/OBCL logs the request to the service log tables, a job/scheduler will be processing these records from this table, creates a request xml and the send the request to ELCM for processing.

#### 1.4.2 Value Date Based Fee Processing

System capability enhanced to have below points:

The facility to store value dated balances for different balance types.



- Configure rules, class, compute fees based on different value dated balances, accrue the fees, and liquidate the fees.
- Trigger contingent entries for limits

#### 1.4.3 Enhancements in Facilities Maintenance

Facility provided in Enterprise Limits and Collateral Management to maintain value date at Facility level. According to the value date maintenance value dated balances for different balance types will be computed.

System capability enhanced to capture events and accounting entries triggered at facility level

#### 1.4.4 Remediation for SQLJ in 12R2

SQLJ will no longer be supported in Oracle 12C R2 hence the SQLJ persistence components are converted to JDBC classes. A utility has been provided to convert SQLJ units to JDBC, this will be used to convert existing units.



## 2. Components of the Software

## 2.1 <u>Documents accompanying the software</u>

The various documents accompanying the software are as follows:

- Release Note
- Installer Kit

Note: User Manuals and Installation Guide can be accessed from

http://docs.oracle.com/cd/E88409\_01/index.htm

### 2.2 **Software Components**

Software Components of Oracle FLEXCUBE 14.0.0.0.0 that form part of this release are as follows:

- Host
  - UI Components ( JS,XML)
  - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
  - Reporting Components(Data models(xdm), Reports(xdo and rtf))
  - Process Framework components (BPEL)
- New UI Application Server
  - Java Sources
  - Configuration files used for deployment
- Interface
  - > ASCII interface sources
    - → Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- Gateway
- Java application layer
  - → Java sources
  - → Configuration files used for deployment
  - Messaging layer
    - → Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- Installation utilities



- > Front end based installation for host
- > Front end based installation for Gateway backend
- > Installation documents for
  - → Oracle FLEXCUBE Installer documents
  - → Gateway
- SMS Related Components
- Reports
  - > Stored Procedures (Packages, Functions, Procedures, Views)
  - Repositories and pre-defined Reports
- Online Help Files



## 3. Annexure – A: Environment Details

## 3.1 Tech Stack - Oracle

|                          | Depl<br>oym<br>ent |            |                     |                        |            |         |
|--------------------------|--------------------|------------|---------------------|------------------------|------------|---------|
| Compone                  | opti               | Machine    | Operatin            | Coftwore               | Version    | Domonko |
| nt                       | on                 | Machine    | g System            | Software Oracle Fusion | Version    | Remarks |
|                          |                    |            |                     | Middleware             |            |         |
|                          |                    |            |                     | Infrastructure         | 12.2.1.2.0 |         |
|                          |                    |            | Oracle              | Java HotSpot(TM) JDK   |            |         |
|                          |                    |            | Enterprise          | (with WebLogic         | JDK 1.8    |         |
|                          |                    |            | Linux               | Application Server)    | Update 144 |         |
|                          |                    |            | Server 6.7          | Open Symphony          |            |         |
|                          |                    | Applicatio | (x86 64             | Quartz                 | 2.3        |         |
|                          |                    | n Server   | Bit)                | Oracle Toplink         | 12.2.1.2.0 |         |
|                          |                    |            |                     | Oracle WebLogic        | 10.3.6     |         |
|                          |                    |            |                     |                        | JDK 1.7    |         |
|                          |                    |            |                     | JDK                    | Update 141 |         |
|                          |                    |            |                     | Oracle Database (for   | 12.2.0.1.0 |         |
|                          |                    |            |                     | RCU)                   | (R2)       |         |
|                          |                    |            |                     | Repository Creation    | 11 1 1 0 0 |         |
|                          |                    |            |                     | Utility                | 11.1.1.9.0 |         |
|                          |                    |            |                     |                        |            |         |
|                          |                    |            |                     |                        |            |         |
|                          |                    |            |                     |                        |            |         |
|                          |                    |            |                     |                        |            |         |
|                          |                    |            | Oracle              |                        |            |         |
|                          |                    |            | Enterprise          |                        |            |         |
|                          |                    | Document   | Linux               |                        |            |         |
|                          |                    | Managem    | Server 6.7          |                        |            |         |
|                          |                    | ent        | (x86 64             | Oracle WebCenter       |            |         |
| Oracle                   |                    | System     | Bit)                | Content Imaging        | 11.1.1.9.0 |         |
| FLEXCUBE                 |                    |            | Oracle              |                        |            |         |
| Enterprise<br>Limits and | Stan               |            | Enterprise<br>Linux |                        |            |         |
| Collateral               | Stan<br>d          |            | Server 6.7          |                        |            |         |
| Manageme                 | Alon               | Database   | (x86 64             | Oracle RDBMS           | 12.2.0.1.0 |         |
| nt                       | е                  | Server     | Bit)                | Enterprise Edition     | (R2)       |         |



|                    |            | Oracle WebLogic                | 12.2.1.2.0     |  |
|--------------------|------------|--------------------------------|----------------|--|
|                    |            | 014616 116526816               | JDK 1.8        |  |
|                    | Oracle     | JDK                            | Update 144     |  |
|                    | Enterprise | Oracle Database (for           | 12.2.0.1.0     |  |
|                    | Linux      | RCU)                           | (R2)           |  |
|                    | Server 6.7 | Repository Creation            |                |  |
| Reporting          | (x86 64    | Utility                        | 12.2.1.2.0     |  |
| Server             | Bit)       | Oracle BI Publisher            | 12.2.1.2.0     |  |
|                    |            | Oracle WebLogic                | 12.2.1.2.0     |  |
|                    |            |                                | JDK 1.8        |  |
|                    |            | JDK                            | Update 144     |  |
|                    |            | Oracle Database (for           | 12.2.0.1.0     |  |
|                    | Oracle     | RCU)                           | (R2)           |  |
|                    | Enterprise | Repository Creation            |                |  |
|                    | Linux      | Utility                        | 12.2.1.2.0     |  |
| FLEXCUBE           | Server 6.7 | Oracle Business                |                |  |
| Informatio         | (x86 64    | Intelligence Enterprise        | 422420         |  |
| n Server           | Bit)       | Edition (OBIEE)                | 12.2.1.2.0     |  |
|                    |            | Microsoft Internet             | 11.X           |  |
|                    |            | Explorer                       |                |  |
|                    | Windows    | Mozilla Firefox                | 54+            |  |
|                    | 7          | Google Chrome                  | 59+            |  |
|                    |            | Microsoft Internet<br>Explorer | 11.X           |  |
|                    |            | -                              |                |  |
|                    | Windows    | Mozilla Firefox                | 54+            |  |
|                    | 8          | Google Chrome                  | 59+            |  |
|                    |            | Microsoft Edge                 | Microsoft      |  |
|                    |            |                                | Edge           |  |
|                    | Windows    | Mozilla Firefox                | 54+            |  |
|                    | 10         | Google Chrome                  | 59+            |  |
|                    |            | Mozilla Firefox for            | 54+            |  |
| ol: ·              |            | Mac<br>Safari                  | Safari 9.1.1   |  |
| Client<br>Machines | Mac OC V   |                                |                |  |
| Machines           | Mac OS X   | Google Chrome                  | 59+<br>JDK 1.7 |  |
|                    |            | JDK                            | Update 141     |  |
|                    |            | Oracle WebLogic                | 10.3.6         |  |
|                    |            | Repository Creation            | 10.5.0         |  |
|                    |            | Utility                        | 11.1.1.9.0     |  |
|                    |            | o time y                       | 11.1.1.3.0     |  |
|                    | Oracle     |                                |                |  |
|                    | Enterprise |                                |                |  |
|                    | Linux      | Oracle Identity                |                |  |
| Cinale Ciar        | Server 6.7 | Management (OID)               | 11.1.2.3.0     |  |
| Single Sign        | (x86 64    | Oracle SOA                     |                |  |
| On Server          | Bit)       | OTACIE SUA                     | 11.1.1.9.0     |  |



| 1           | I      |            |            | Our ale lale white A wal |            | 1 |
|-------------|--------|------------|------------|--------------------------|------------|---|
|             |        |            |            | Oracle Identity And      | 11 1 2 2 0 |   |
|             |        |            |            | Access Management        | 11.1.2.3.0 |   |
|             |        |            |            | Oracle Webtier           | 11 1 1 0 0 |   |
|             |        |            |            | Utilities                | 11.1.1.9.0 |   |
|             |        |            |            | Oracle Webgate           | 11.1.2.3.0 |   |
|             |        |            |            |                          |            |   |
|             |        |            |            |                          | OID        |   |
|             |        |            |            | OID Connector            | 11.1.1.6.0 |   |
| Oracle      |        |            |            |                          | 1.8 Update |   |
| FLEXCUBE    |        |            |            | JDK                      | 144        |   |
| Enterprise  |        |            |            | Oracle WebLogic          |            |   |
| Limits and  |        |            |            | Server                   | 12.2.1.2.0 |   |
| Collateral  |        |            |            | Oracle Repository        | 12.2.1.2.0 |   |
| Manageme    |        |            | Oracle     | Creation Utility (RCU)   |            |   |
| nt          |        |            | Enterprise | - To create SOA          |            |   |
| BPEL/BPM    | Stan   |            | Linux      | related schemas for      |            |   |
| N Processes | d      |            | Server 6.7 | BPEL                     | 12.2.1.2.0 |   |
| and Process | Alon   | Applicatio | (x86 64    | Oracle SOA Suite,        |            |   |
| Framework   | е      | n Server   | Bit)       | Oracle BPM Suite         | 12.2.1.2.0 |   |
|             | Web    |            | -,         |                          |            |   |
|             | servi  |            |            |                          |            |   |
|             | ces    |            |            |                          |            |   |
|             | (inco  |            |            |                          |            |   |
|             | ming   |            |            |                          |            |   |
|             | )      |            |            |                          |            |   |
|             | HTTP   |            |            |                          |            |   |
|             | Servl  |            |            |                          |            |   |
|             | et     |            |            |                          |            |   |
|             | (inco  |            |            |                          |            |   |
|             | ming   |            |            |                          |            |   |
|             | )      |            |            |                          |            |   |
|             | EJB    |            |            |                          |            |   |
|             | (inco  |            |            |                          |            |   |
|             | ming   |            |            |                          |            |   |
|             | )      |            |            |                          |            |   |
| Oracle      | MDB    |            |            |                          |            |   |
| FLEXCUBE    | (inco  |            |            |                          |            |   |
| Enterprise  | ming   |            |            |                          |            |   |
| Limits and  | )      |            | Oracle     |                          |            |   |
| Collateral  | Notifi |            | Enterprise |                          |            |   |
| Manageme    | catio  |            | Linux      |                          |            |   |
| nt          | ns     |            | Server 6.7 |                          |            |   |
| Integration | (outg  | Integratio | (x86 64    | Oracle WebLogic          | 400:55     |   |
| Gateway     | oing)  | n Server   | Bit)       | Server                   | 12.2.1.2.0 |   |



## 3.2 Tech Stack - IBM

| Deployment   |             | Operating                  |                                   |                 |
|--------------|-------------|----------------------------|-----------------------------------|-----------------|
| option       | Machine     | System                     | Software                          | Version         |
|              |             |                            | IBM WebSphere Application         |                 |
|              |             |                            | Server with inbuilt JVM (IBM JDK  |                 |
|              |             |                            | 1.8_64)                           | 9.0             |
|              |             |                            | IBM WebSphere MQ Server           | 9.0             |
|              |             | Oracle                     | Oracle Toplink                    | 12.2.1.2.0      |
|              |             | Enterprise Linux           | Open Symphony Quartz              | 2.3             |
|              | Application | Server 6.7 (x86            | Oracle WebCenter Content:         |                 |
|              | Server      | 64 Bit)                    | Imaging                           | 11.1.1.9.0      |
|              |             | Oracle                     |                                   |                 |
|              |             | Enterprise Linux           |                                   |                 |
|              | Database    | Server 6.7 (x86            |                                   |                 |
|              | Server      | 64 Bit)                    | Oracle RDBMS Enterprise Edition   | 12.2.0.1.0 (R2) |
|              |             |                            | Microsoft Internet Explorer       | 11.X            |
|              |             |                            | Mozilla Firefox                   | 54+             |
|              |             | Windows 7                  | Google Chrome                     | 59+             |
|              |             |                            | Microsoft Internet Explorer       | 11.X            |
|              |             |                            | Mozilla Firefox                   | 54+             |
|              |             | Windows 8                  | Google Chrome                     | 59+             |
|              |             |                            | Microsoft Edge                    | Microsoft Edge  |
|              |             |                            | Mozilla Firefox                   | 54+             |
|              |             | Windows 10                 | Google Chrome                     | 59+             |
|              |             |                            | Mozilla Firefox for Mac           | 54+             |
|              | Client      |                            | Safari                            | 9.1.1           |
| Standalone   | Machines    | Mac OS X                   | Google Chrome                     | 59+             |
|              |             | Oracle                     |                                   |                 |
|              |             | Enterprise Linux           | IBM WebSphere Application         |                 |
| Web services | Integration | Server 6.7 (x86            | Server with inbuilt JVM ( IBM JDK |                 |
| (incoming)   | Server      | 64 Bit)                    | 1.8_64)                           | 9.0             |
|              |             | Oracle                     |                                   |                 |
|              |             | Enterprise Linux           | IBM WebSphere Application         |                 |
| HTTP Servlet | Integration | Server 6.7 (x86            | Server with inbuilt JVM (IBM JDK  | 0.0             |
| (incoming)   | Server      | 64 Bit)                    | 1.8_64)                           | 9.0             |
|              |             | Oracle<br>Enterprise Linux | IBM WebSphere Application         |                 |
| EJB          | Integration | Server 6.7 (x86            | Server with inbuilt JVM (IBM JDK  |                 |
| (incoming)   | Server      | 64 Bit)                    | 1.8_64)                           | 9.0             |
| (mcoming)    | JCI VCI     | Oracle                     | IBM WebSphere Application         | 5.0             |
| MDB          | Integration | Enterprise Linux           | Server with inbuilt JVM (IBM JDK  |                 |
| (incoming)   | Server      | Server 6.7 (x86            | 1.8_64)                           | 9.0             |



|               |             | 64 Bit)          | IBM WebSphere MQ Server          | 9.0 |
|---------------|-------------|------------------|----------------------------------|-----|
|               |             | Oracle           | IBM WebSphere Application        |     |
|               |             | Enterprise Linux | Server with inbuilt JVM (IBM JDK |     |
| Notifications | Integration | Server 6.7 (x86  | 1.8_64)                          | 9.0 |
| (outgoing)    | Server      | 64 Bit)          | IBM WebSphere MQ Server          | 9.0 |



# 4. Annexure – B: Third Party Software Details

| Licensor Name                  | Licensed Technology                    | Version |
|--------------------------------|--|---------|
|                                |  |         |
| Apache                         | Apache Commons Transaction 1.2         | 1.2     |
| MetaStuff, Ltd.                | Dom4j                                  | 1.6.1   |
| Apache                         | xercesImpl.jar                         | 2.11    |
| Apache                         | xml-apis.jar                           | 2.11.0  |
| Sean Owen                      | PJL Compressing Filter                 | 2.2.0   |
| Apache                         | Apache XMLBeans                        | 2.6.0   |
| Apache                         | Xalan                                  | 2.7.2   |
| Yahoo                          | YUI Compressor                         | 2.4.8   |
| Apache                         | XML Commons Resolver                   | 1.2     |
| Apache                         | commons-logging                        | 1.2     |
| The Apache Software Foundation | Serializer                             | 2.7.2   |
| Apache                         | Apache Commons Codec                   | 1.1     |
| Apache                         | Ant                                    | 1.10.1  |
| Apache                         | Commons Net                            | 3.6     |
| Apache                         | commons-io                             | 2.5     |
| Apache                         | Log4J                                  | 2.8.2   |
| Apache                         | Apache POI                             | 3.16    |
| Terracota                      | Quartz Job Scheduler                   | 2.3     |
|                                | SLF4J Simple Logging Façade for Java   |         |
| SLF4J                          | (slf4j-api-1.7.25)                     | 1.7.25  |
| SLF4J                          | Simple Logging Façade for Java (SLF4J) | 1.7.25  |



# 5. Annexure – C: Module Code and Description

| Abbreviation/ Acronym | Meaning                    |
|-----------------------|----------------------------|
| CO (Core)             | Oracle FLEXCUBE Core       |
| SMS                   | Security Management System |
| EL                    | Enterprise Limit           |

