Product Release Note

Oracle FLEXCUBE Universal Banking

Release 14.5.0.0.0

Part Number: F42208-01

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Financial Services

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Version 14.5.0.0.0

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1. Release Notes

1.1 <u>Background</u>

Oracle Financial Services Software Limited has developed Oracle FLEXCUBE Universal Banking, which enable banks to create a distributed network of branches for effective marketing and efficient handling of customer transactions.

Oracle FLEXCUBE Universal Banking is a real-time online solution, enabled for multi-currency, multilingual, multi-entity, multi-instance operations. Its mission-critical and robust architecture and use of leading-edge industry standard products ensure almost limitless scalability.

1.2 <u>Purpose</u>

The purpose of this Release Note is to propagate the enhancements in Oracle FLEXCUBE Universal Banking 14.5.0.0.0.

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1.3 <u>Release Highlights</u>

The rationale for the product release of Oracle FLEXCUBE Universal Banking version 14.5.0.0.0 is to support regulatory requirement and enhance features that are essential in competitive market.

Following are the features included in the release along with forward porting of applicable fixes related to the incidences reported in previous versions and technical qualification to comply with approved Tech Stack.

- Technology Refresh and Innovation
  - ➢ ChatBot for End of Day status check and error resolution
  - ➢ ChatBot for generic Error Resolution
  - ➢ Term Deposit and CASA Processing Batches in Java micro services
  - ➢ External credit approval (ECA) handling through Java Rest API
  - ➢ Services to support Oracle Banking Digital Experience queries
- Functional and Regulatory Enhancements
  - ➢ Dual Currency Deposit without Options Contract
  - ➢ CAMT053 Straight through processing
  - ➢ CAMT053 statement generation
  - ➢ Support for Risk Free Rates (RFR) in Corporate Deposit
  - ➢ Future Value Dated Rate handling for Corporate Deposit
  - ➢ Inactive Customer Status
  - ➢ Enhancement in External Credit Approval (ECA) and External Accounting (EA)
  - ➢ Card Management Changes for BIN
  - ➢ Translation support for current FLEXCUBE release
- Integration Enhancements
  - ➢ Relationship Pricing support for external components
  - ➢ Integration with Oracle Banking Payments for Clearing transactions
  - ➢ Integration with Oracle Banking Payments for Demand Draft/Bankers Check issuance
  - ➢ Integration with Oracle Banking Enterprise Default Management for Loan collection
  - ➢ Corporate Customer 360 degree integration with Treasury, Trade and Corporate Lending Product Processors
  - ➢ Corporate Deposit Integration with Trade Finance Product Processor
  - ➢ Replication of External entities from FCUBS to OBMA Common Core
- LATAM Cluster Feature Enhancements
  - ➢ These enhancements are available only as part of LATAM localisation pack

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1.3.1   ChatBot for End of Day status check and error resolution

- Using Oracle Digital Assistant, query of EOD status and resolution steps for common types of EOD errors is supported using chat bots.

1.3.2   ChatBot for generic Error Resolution

- Using Oracle Digital Assistant, facility to get resolution steps for common types of errors encountered while doing day to day activities is now supported using chat bot.

1.3.3   Term Deposit and CASA Processing Batches in Java micro services

- Batches mentioned in below table are converted from PLSQL to Java micro services.

PL/SQL Batch	Java Batch	Batch Name/Details
ICBEOD	ICBEOD	Interest and Charges EOD Process
ICBOD	ICJBOD	Interest and Charges BOD Process
TDBOD	TDJBOD	Term Deposits BOD Process
TDEOD	TDJEOD	Term Deposits EOD Process
VDBALUPD	ACJVDBAL	Value dated balance update batch
DABHOFF	DAJHOFF	Deferred Accounting Batch
ACBCUTOF	ACJCUTOF	Mark Branch Availability Service
ACBCUTOF	ACJDAONL	Deferred Accounting posting batch
ICSOD	ICJSOD	Income recognition - OD component wise
POSTDTCH	STJRLTNK	Release tanked accounts
CASABAT	CAJMKDOR	Mark Dormant account (ACDORBOD)
CASABAT	CAJHSIGD	Joint holder Signature batch (JHSIGDEL)
CASABAT	CAJMIMAJ	Customer Minor to Major Conversion (MIMACNV)
CASABAT	ACJSTDEL	Clearing Account Statement Report (ACSTDEL)
STODBAL	STJODBAL	IC Owing amount – Component wise tracking for OD
ACBCSTAT	ACJCSTAT	Customer Account Statistics batch
STBSTFEE	STJSTFEE	Statement of fees and interest
EIPKS.FN_MARK_STATUS	ACJUNTNK	Un tanking of accounting entries.
EIPKS.FN_MARK_STATUS	ACJCYVLC	Currency and Value date wise mismatch check
EIPKS.FN_END_OF_DAY	ACJUPOBL	CASA TOV related update batch
EIPKS.FN_END_OF_DAY	GLJBLPTD	GL Average balance PTD
EIPKS.FN_PREBOD	ACJPRBOD	Pre BOD Accounting process batch
ICDLIQAC	ICDLIQAC	Single Account Online Liquidation
ICDOLIQ	ICDOLIQ	Multiple Account Online Liquidation
ICDCALAC	ICDCALAC	Single Account Online Calculation
ICDMCALC	ICDMCALC	Multiple Account Online Calculation
ACDENTRY	ACDENTRY	Online Accounting entry posting

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1.3.4   External credit approval handling through Java Rest API

- External credit approval handling is available as a java rest service which can be used by external systems. Debit transactions from external system would be processed through ECA.

1.3.5   Services to support Oracle Banking Digital Experience queries

- OBDX integrates with FLEXCUBE via Views for Query purpose, this is being remediated to use services/APIs from FCUBS. Existing services in FLEXCUBE have been enhanced, new services introduced to cater requests originating from OBDX.

1.3.6   Dual Currency Deposit without Options contract

- Existing dual currency deposit feature has been enhanced for booking a dual currency deposit without options contract.

1.3.7   CAMT053 Straight through processing

- Straight through processing of CAMT053 which is an Account Statement message is supported. Data from CAMT053 is used for Nostro reconciliation.

1.3.8   CAMT 053 statement generation with additional tags

- CAMT 053 message has been enriched to support optional fields for both debits and credits
- The external product processors can send statement information required for CAMT 053 generation along with External Accounting (EA) requests or as a separate call after EA posting.

1.3.9   Support for Risk Free Rates (RFR) in Corporate Deposit Module

- Corporate Deposit Module is enhanced to support RFR (Risk Free Rate). RFR Rate Input, Contract Booking with RFR rate, Accrual and Liquidation events with existing Batch are supported.

1.3.10   Future Value Dated Rate handling for Corporate Deposit

- Overriding of Future Value dated fixed rates against prevailing rate on Corporate Deposit (CD) Contract Amendment is supported.
- Overriding of rates functionality is applicable only for Fixed rate Interest component and is not extended to Negative Interest rate and floating rate Interest components.

1.3.11   Inactive Customer Status

- A new status as "Inactive" is introduced at Customer level. System would derive this status based on transactions and contracts for Customers within specified time period. Customer status also can be re-activated manually.
- This status is just for information/reporting purpose and is not used for any validations.

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1.3.12 Enhancement in External Credit Approval (ECA) and External Accounting (EA)

- Tags to send Maker Id, Checker Id and Contract reference number have been added to External Accounting (EA) API.
- Notifications are supported for External Credit Approval (ECA) and External Accounting (EA) Status changes. This can be used for processing after initial requests gets into Pending status.
- Additional tags are provided in EA for supporting online/accounting entry level revaluation.
- Performance enhancements in ECA/EA.

1.3.13 Card Management Changes for BIN

- Enhancement to hold 8 digits for BIN (Bank Identification number) is supported. This will co-exist along with current 6 digits support for BIN

1.3.14 Incremental translation support for current FLEXCUBE release

- Static Data for screens labels, menus and error message are released for current release for French, Arabic , Chinese, Vietnamese, Spanish, Portuguese European, Portuguese Brazilian languages

1.3.15 Relationship pricing support for external components

- Relationship Pricing module is enhanced to support pricing for external banking product processors.

1.3.16 Integration with Oracle Banking Payments for clearing transactions

- Integration of FCUBS with Oracle Banking Payments Product processor to support requirements of Clearing module used in TD(Term Deposit), PDC(Post Dated Cheque) and RB(Retail Bills) for Outward Clearing.

1.3.17 Integration with Oracle Banking Payments for Demand Draft/Bankers Cheque issuance

- Modules CASA, TD and CL are integrated with OBPM to provide support for DD (Demand Draft)/BC (Bankers Cheque) where necessary.
- CASA Account Closure, TD partial/full redemption balance can be issued as a Demand Draft (DD) or Banker's Cheque (BC) through FCUBS-OBPM handshake.

1.3.18 Integration with Oracle Banking Enterprise Default Management for Loan collection

- Retail Lending Loan Contracts which are overdue on a selected date are extracted with required details and shared to external collections system Oracle Banking Enterprise Default Management (OBDEM) of Oracle Banking Product. Collections lifecycle for these contracts can be managed in OBDEM.

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1.3.19 Corporate Customer 360 degree integration with Treasury, Trade and Corporate Lending Product Processor

- Corporate 360 degree screen is enhanced to pull and display details of corporate assets/liabilities from external corporate product processors, namely Oracle Banking Trade Finance (OBTF), Oracle Banking Treasury Management (OBTR) and Oracle banking Corporate Lending (OBCL).

1.3.20 Corporate Deposit Integration with Trade Finance Product Processor

- Corporate deposit module is integrated with Oracle Banking Trade Finance product processor for External LOV and Service during CD Linkage in LC/BC Contracts.
- Service changes for Corporate Deposits to block and unblock for an amount is supported.

1.3.21 Replication of External entities from FCUBS to OBMA Common Core

- Replication of Customer and Customer Account from FLEXCUBE (FCUBS) to Oracle Banking Micro services Architecture (OBMA) Common Core as external entities is supported. OBRH (Oracle Banking Routing Hub) is used to convert message from FCUBS format of message to OBMA format of message.

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1.3.22 LATAM Cluster Feature Enhancements

- Support of two Interest Modalities - Discounted & Bearing - of Loan Accounts
  - ➢ Loan account is enhanced for two interest modalities - Discounted in creation, bearing on maturity through special rollover with outstanding amount.
- Cierre Handling
  - ➢ Manage schedules from aging and its implications when outstanding amount of schedule is considerably small and within residue amount or percentage parameterized for Intermediate and Bullet Schedule types.
- Clearing Process Restriction
  - ➢ Restricting clearing process of external bank cheques when presented to bank for liquidating a loan. Bank will operationally manage the external cheques.
- Compound Penal Interest (Interest De Mora)
  - ➢ Configuring of penal calculation for overdue accounts on schedule due date with daily compounding.
- Accrue On start Date
  - ➢ Feature to trigger accrual on components' schedule start date for its whole amount due
- Control De Tasa (Rate Control)
  - ➢ Controlling of interest rates between Maximum Remuneratory rate and Usura Rate, and applying the least, so that Interest rate is always within Usura rate during lifecycle of loan.
- Conversion De Tasa (Rate Conversion)
  - ➢ Maintain and convert interest rates in periodic, discounted, effective annual form. Option to convert interest rate attributes using rate template attached to user defined elements.
- Cover Account Notification
  - ➢ To send notification to customers to intimate expiry of the cover account facility.
- Massive Issuance of Debit Cards
  - ➢ Reissuing of debit cards in bulk, eg for promotional activities, offering additional features, or for reissuing cards due to expiry where external system will interface files with data.
- Tracking dates for Transactions
  - ➢ Allows bank to maintain and update through an interface for 'first and last transaction date' in ATM', 'First and last transaction date in POS' for Debit Cards.
- Debit Card Query
  - ➢ Querying Card details through service for Debit Card status, change history, account and account numbers linked to Debit Card based on Customer RUT and Debit card number.
- Blocking of Debit Cards for wrong PIN tries
  - ➢ Feature to block Debit cards for maximum wrong pin (validated outside FCUBS) tries through various channels.
- Support for LATAM specific ATM maintenance
  - ➢ Cross validate Terminal ID during Debit Card transactions to verify its usage at specific terminals; and to track daily transaction limit amount utilized, daily transaction counts for ATM and POS transactions.

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2. Deprecated Features

Below mentioned modules/features are deprecated in Oracle FLEXCUBE universal Banking 14.5.0.0.0

- BPEL processes for Islamic financing are deprecated and in lieu BPMN processes are to be used
- Securitisation/ Islamic Securitisation
- Islamic Financial Syndication
- Oracle FLEXCUBE Universal Banking Branch
- Oracle FLEXCUBE Information Server Base for Universal Banking
- Oracle FLEXCUBE Information Server Retail Assets Data Mart for Universal Banking
- Oracle FLEXCUBE Information Server Retail Liabilities Data Mart for Universal Banking
- Oracle FLEXCUBE Testing Workbench for Universal Banking
- Processing of Referral Queue
- Following Adaptors are deprecated
  o Oracle Banking Platform Origination integration to FLEXCUBE
  o Bank in a Box – Integration with Siebel CRM
  o Integration with Oracle General Ledger

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3. Terminal Features

Below mentioned modules/features are made 'terminal' in Oracle FLEXCUBE universal Banking 14.5.0.0.0. These modules/features would not be enhanced and eventually get deprecated in upcoming release(s).

- Oracle FLEXCUBE Universal Banking Collections
- Retail Teller module
- Accounting Rate and Charges (ARC) Maintenance (IFDATMMN Screen)
- PL/SQL ATM POS Processing
- Relationship Manager module
- Salary processing module
- Corporate Teller module
- Project Financing module
- Utility Payment module
- Oracle FLEXCUBE Universal Banking Process Framework Base
- Direct Accounting processor (DAP) interface
- PL/SQL Term Deposits batches
- PL/SQL CASA batches
- PL/SQL processing for Interest and Charges Module
- Process flow for Islamic Finance products Murabaha, Ijara ,Tawaruq, Istisnaa

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4. Components of the Software

4.1 Documents Accompanying the Software

The various documents accompanying the software are as follows:

- Product Release Note and Installer Kit

User and Installation manuals – https://docs.oracle.com/cd/F42208_01/index.htm

- Online Help Files

4.2 Software Components

Software Components of Oracle FLEXCUBE 14.5.0.0.0 that form part of this release are as follows:

- Host
  - UI Components (JS,XML)
  - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
  - Tables, Types, Sequences, INC
  - Reporting Components(Data models(xdmz), Reports(xdoz), Subtemplate (xsbz))
  - Process Framework components (BPEL,BPMN,BAM,BRE)
  - OBIEE Module RPDs
- Java application layer
  - Java sources
  - Configuration files used for deployment
- Integration Gateway
- Switch Gateway (ATM/POS/IVR)
- REST Services
  - Java application layer
    - → Java sources
    - → Configuration files used for deployment

Repositories and pre-defined Reports

- Conversion Utilities
- Installation utilities
- ADF files used by Generic Interface (GI) – incoming and outgoing
- ODT
- Service Components
- Reports Templates (rtf)
- Configuration files used for deployment

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5. Tech Stack

Component	Deployment option	Machine	Operating System	Software	Version Number
Oracle FLEXCUBE Universal Banking	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	Oracle Fusion Middleware Infrastructure	12.2.1.4.0
				Java HotSpot(TM) JDK (with WebLogic Application Server)	1.8 Update 281
				Open Symphony Quartz	2.3.2
		Document Management System	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	Oracle WebLogic	12.2.1.4.0
				JDK	1.8 Update 281
				Oracle Database (for RCU)	19.10.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle WebCenter Content Imaging	12.2.1.4.0
		Database Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	19.10.0.0.0
		Reporting Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	Oracle WebLogic	12.2.1.4.0
				JDK	1.8 Update 281
				Oracle Analytical Server	5.9.0
		Client Machines Browser Support is strictly tied to the Browser itself , and no longer based on Operating System.	Window 10	Mozilla Firefox	87+
				Google Chrome	88+
				Microsoft Edge	89+
			Mac OS X	Mozilla Firefox for Mac	87+
				Safari	14+
				Google Chrome	88+
		Single Sign On Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	JDK	1.8 Update 281
				Oracle WebLogic	12.2.1.4.0
				Repository Creation Utility	12.2.1.4.0
				Oracle Identity Management	12.2.1.4.0
				Oracle Identity And Access Management	12.2.1.4.0
				Oracle Webtier Utilities	12.2.1.4.0
				Oracle Webgate	12.2.1.4.0

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Oracle FLEXCUBE Universal Banking BPMN Processes and Process Framework	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	JDK	1.8 Update 281
				Oracle WebLogic Server	12.2.1.4.0
				Oracle Database (for RCU)	19.10.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle SOA Suite, Oracle BPM Suite	12.2.1.4.0
Oracle FLEXCUBE Universal Banking Integration Gateway	Web services (incoming)	Integration Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	Oracle WebLogic Server	12.2.1.4.0
	HTTP Servlet (incoming)				
	EJB (incoming)				
	MDB (incoming)				
	Notifications (outgoing)				
Oracle FLEXCUBE Universal Banking Switch Integration Gateway	Switch Integration Gateway	Integration Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	JDK	1.8 Update 281
Oracle FLEXCUBE Universal Banking REST Services	Web services	Integration Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	JDK	1.8 Update 281
				Oracle WebLogic Server	12.2.1.4.0
				Oracle Toplink	12.2.1.4.0
Oracle FLEXCUBE Machine Learning	Centralized	Machine Learning Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	OML4R (Previously Oracle R Enterprise)	1.5.1
Oracle FLEXCUBE Oracle Digital Assistant Integration	Centralized	Application Server	Oracle Enterprise Linux Server 8.3 (x86 64 Bit)	oda-native-client-sdk-js	20.3.1

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6. Third Party Software Details

- For information on the third party software details, refer Oracle FLEXCUBE Universal Banking 14.5.0.0.0 License Guide

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