Product Release Note
Oracle FLEXCUBE Universal Banking
Release 14.0.0.0.0
December 2017

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FINANCIAL SERVICES

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Product Release Note
December 2017
Version 14.0.0.0.0

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1. Release Notes

1.1 Background

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 Purpose

The purpose of this Release Note is to propagate the enhancements in Oracle FLEXCUBE Universal Banking 14.0.0.0.0.

1.3 Abbreviations

Abbreviation	Description
BPEL	Business Process Execution Language
BPMN	Business Process Model and Notation
CRS	Common Reporting System
CASA	Current account and Savings Account
EOD	End of Day
KYC	Know Your Customer
OECD	Organization of Economic Co-operation and Development
ReST Services	Representational State Transfer services
SSO	Single Sign On
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UI	User Interface
XML	eXtensible Markup Language

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

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1.4 <u>Release Highlights</u>

The rationale for the release of Oracle FLEXCUBE Universal Banking version 14.0.0.0.0 is to support regulatory requirement and enhance features that are essential in competitive market.

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

- MT798 (SWIFT for Corporates) support for Trade Finance
- Letter of Credit - Transfer enhancements
- SWIFT 2018 Documentary Credit message changes
- OECD-CRS support
- Approval by e-mail feature for retail teller transactions
- Support for Financial Inclusion Accounts
- Account Forecasting (For Nostro Accounts)
- External accounting enhanced to support;
- Account statement details
  - ➢ MIS details
  - ➢ Multicurrency Account
- Oracle 12cR2 Database Qualification Related Changes
- Local Limit support
- Integration with External Limits and Collateral Management System

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1.5 <u>Release Enhancements</u>

1.5.1 <u>MT798 (SWIFT for Corporates) Support for Trade Finance</u>

Enhancement supporting MT798 messages which enables bank users to exchange the MT798 messages with corporate customers.

Corporate to Bank (C2B)

Bank receives MT 798 Trade Envelope Messages from Corporate Customers and initiate Trade Transaction based on content of the Envelope Message

Bank to Corporate (B2C)

Bank sends MT 798 Trade Envelope Messages to their Corporate Customers as an output of certain Trade Transactions

MT798 Trade envelope messages supported in following Trade Finance transactions:

- Documentary Credit – Import
- Drawings under Documentary Credit – Import
- Documentary Credit – Export
- Drawings under Documentary Credit – Export
- Stand by Letter of Credit/ Guarantee
- Other notification messages corresponding to existing swift messages

1.5.2 <u>Letter of Credit - Transfer</u>

Letter of credit module's transfer functionality is enriched to address following features:

- Handling substitution of documents by first beneficiary
- Maintenance of multiple goods with details on number of units and its unit price
- Tracking of amount available for further transfer when there is reduction in unit price
- Differentiating the bill submitted by the second beneficiary and the original beneficiary

1.5.3 <u>SWIFT 2018 Documentary Credit Message Changes</u>

- Documentary credit messages are enhanced to comply with SWIFT 2018 standards
- Tag names, field option value, length of the tag fields have been enhanced as per the SR2018 standard
- Character set support of the tag values has been enhanced to 'Z 'Character set
- Number of extension message has been increased to 8 from 3 for messages MT701, MT711 & MT721
- Validations are handled as per the standard
- Addition of new message: MT744 for Notice of non-confirming reimbursement claim
- Addition of new extension message: MT708 as a continuation of MT707
- MT707 will populate the field tags in the message only when corresponding fields are amended
- STP of MT707 will be processed through amendment confirmation routine

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- Cancellation request can be processed through amendment confirmation

1.5.4 <u>OECD-CRS Support</u>

A framework is introduced in the system to support Common Reporting System (CRS) for sharing financial information among its member countries established by Organization of Economic Co-operation and Development (OECD).

System provides option to review financial accounts, identify reportable accounts by applying due diligence rules, and then report the relevant information.

Following are the update performed to support OECD- CRS:

- To capture details for parametrizing of CRS, maintenance screen are introduced
- Customer creation is enriched in the area of KYC maintenance
- Origination related screens enhanced to capture additional data for CRS
- New batch programs are introduced to process CRS information

1.5.5 <u>Approval by E-mail Feature for Retail Teller Transactions</u>

Retail teller transactions shall trigger emails to checker(s) enabling them to authorise transactions, which adds an advantage as intimation to the checker and facilitate in authorising the transactions.

- Checker can approve/reject transactions on e-mail by giving comments.
- E-mail approval 'queue screen' to keep track of e-mail status of transactions is made available

1.5.6 <u>Support for Financial Inclusion Accounts</u>

Financial Inclusion customers and customer accounts can be created in a single operation with minimal data. These accounts are lighter (no-frills) compared to normal CASA accounts and can be used in limited set of screens.

1.5.7 <u>Account Forecast (For Nostro Accounts)</u>

A dashboard has been provided to view of current and projected Nostro account positions based on expected future transactions.

Projected position will be advantage to manage the liquidity mismatch and avoid costly overdrafts/ idle balances on Nostro accounts.

Following details are available on the dashboard:

- NOSTRO Account balance and the corresponding mirror account balance
- Reconciled and unreconciled balances
- NOSTRO Projection balances based on projection preference
- Projected NOSTRO balance for a future date or period based on expected future dated transactions

This dashboard can be used for customer account balances also.

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1.5.8 External Accounting Interface Enhancements

External accounting interface which supports posting of accounting to DDA is enhanced as mentioned in below sections:

Account Statement Details

External accounting service is enhanced to capture account statement details from external systems. This data is used to populate respective tags while generating Account statements (Mail/ SWIFT).

MIS Details

External system can provide MIS details along with the accounting entries. These details will be used while building MIS balances.

Multi-Currency Account

External system can pass accounting entry to a multicurrency account. Accounting interface would derive underlying CASA account, for a given multicurrency, account number plus currency combination and proceed with accounting.

1.5.9 Oracle12cR2 Database Qualification Related Changes

In addition to qualifying the system to Oracle database 12cR2 (Version 12.2.0.1), it is enhanced to support the use of Oracle directory name instead of file path for UTL_FILE I/O operations as part of eliminating the deprecated features of Oracle 12cR2.

1.5.10 Local Limit Support

Oracle FLEXUCBE Universal Banking has been enhanced to incorporate basic limit functionality. Following are the details

- New functionalities introduced to capture Local facilities and Local collaterals
- Local facilities and collaterals can be linked to CASA over draft and other modules
- Utilization tracking, Limit balances and Limit validations
- Fund utilization sequence for CASA

1.5.11 Integration with External Limits and Collateral Management System

Oracle FLEXCUBE Universal Banking has been enhanced to support integration with External Limits and Collateral Management system. Integration can be done in following modes:

- Synchronous Mode
- Asynchronous Mode

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2. Components of the Software

2.1 Documents Accompanying the Software

The various documents accompanying the software are as follows:

- Product Release Note
- Installer Kit
- User and Installation manuals – Please follow
  http://docs.oracle.com/cd/E88855_01/index.htm
- Online Help Files

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)
  - ➤ Tables, Types, Sequences, INC
  - ➤ Reporting Components(Data models(xdmz), Reports(xdoz),Subtemplate(xsbz))
  - ➤ Process Framework components (BPEL,BPMN,BAM,BRE)
- Branch
  - ➤ Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
  - ➤ UI Components (JS,XML)
  - ➤ Java sources
- 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
- Oracle FLEXCUBE Information Server
  - ➤ Stored Procedures (Packages, Functions, Procedures, Views)
  - ➤ Repositories and pre-defined Reports
- Conversion Utilities
- Installation utilities
- ADF files used by Generic Interface (GI) – incoming and outgoing

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- Tools
  - → ODT
  - → OFT

3. Annexure – A: Environment Details

3.1 Tech Stack – Oracle

Component	Deployment option	Machine	Operating System	Software	Version Number
Oracle FLEXCUBE Universal Banking	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle Fusion Middleware Infrastructure	12.2.1.2.0
				Java HotSpot(TM) JDK (with WebLogic Application Server)	JDK 1.8 Update 144
				Open Symphony Quartz	2.2.3
				Oracle Toplink	12.2.1.2.0
		Document Management System	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic	10.3.6
				JDK	JDK 1.7 Update 121
				Oracle Database (for RCU)	12.1.0.2.0
				Repository Creation Utility	11.1.1.9.0
				Oracle WebCenter Content Imaging	11.1.1.9.0
		Database Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	12.2.0.1.0
		Reporting Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic	12.2.1.2.0
				JDK	JDK 1.8 Update 144
				Oracle Database (for RCU)	12.1.0.2.0

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Component	Deployment option	Machine	Operating System	Software	Version Number
				Repository Creation Utility	12.2.1.2.0
				Oracle BI Publisher	12.2.1.2.0
		FLEXCUBE Information Server – Analytics	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic	12.2.1.2.0
				JDK	JDK 1.8 Update 144
				Oracle Database (for RCU)	12.1.0.2.0
				Repository Creation Utility	12.2.1.2.0
				Oracle Business Intelligence Enterprise Edition (OBIEE)	12.2.1.2.0
		FLEXCUBE Information Server - Data warehouse	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle Golden Gate	12.2.0.1.0
				Oracle Database (for RCU)	12.1.0.2.0
				Repository Creation Utility	12.2.1.2.0
				Oracle Data integrator	12.2.1.2.0
				Oracle Data integrator Java EE Agent	12.2.1.2.0
				Oracle WebLogic Server Infrastructure	12.2.1.2.0
		#Client Machines	Windows 7	Internet Explorer	Microsoft Internet Explorer Release (11.*)
				Mozilla Firefox	Mozilla Firefox Release (50+)
				Google Chrome	Google Chrome Release (59+)
			Windows 8	Internet Explorer	Microsoft Internet Explorer Release

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Component	Deployment option	Machine	Operating System	Software	Version Number
					(11.*)
				Mozilla Firefox	Mozilla Firefox Release (47+)
				Google Chrome	Google Chrome Release (59+)
			Windows 10	Internet Explorer	Microsoft Edge
				Mozilla Firefox	Mozilla Firefox Release (47+)
				Google Chrome	Google Chrome Release (59+)
			Mac OS X	Mozilla Firefox	Mozilla Firefox for Mac (50+)
				Safari	Safari 10+
				Google Chrome	Google Chrome Release (59+)
		Single Sign On Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	JDK	JDK 1.7 Update 121
				Oracle WebLogic	10.3.6
				Repository Creation Utility	11.1.1.9.0
				Oracle Identity Management	11.1.1.9.0
				Oracle SOA	11.1.1.9.0
				Oracle Identity And Access Management	11.1.2.3.0
				Oracle Webtier Utilities	11.1.1.9.0
				Oracle Webgate	11.1.2.3.0
				OID Connector	OID 11.1.1.6.0
	UI	Branch	Oracle	JDK	1.8 Update 144

Component	Deployment option	Machine	Operating System	Software	Version Number
	Decentralized branch	Application Server – Decentralized	Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic Server	12.2.1.2.0
		Database Branch for Decentralized mode		Oracle RDBMS Standard Edition (SE2)	12.2.0.1.0
Oracle FLEXCUBE Universal Banking BPEL/BPMN Processes and Process Framework	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	JDK	1.8 Update 144
				Oracle WebLogic Server	12.2.1.2.0
				Oracle Database (for RCU)	12.2.0.1.0
				Repository Creation Utility	12.2.1.2.0
				Oracle SOA Suite, Oracle BPM Suite	12.2.1.2.0
Oracle FLEXCUBE Universal Banking Integration Gateway	Web services (incoming)	Integration Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic Server	12.2.1.2.0
	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 6.6 (x86 64 Bit)	JDK	1.8 Update 144
Oracle	Web services	Integration	Oracle	JDK	1.8 Update 144

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Component	Deployment option	Machine	Operating System	Software	Version Number
FLEXCUBE Universal Banking ReST		Server	Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle WebLogic Server	12.2.1.2.0
				Oracle Toplink	12.2.1.2.0

Note: # Browser support is no longer based on Operating Systems but strictly tied to the browser themselves, no matter which Operating Systems they are installed on. Current release is certified on client workstations with Windows 7, 8, 10 and Mac OS X.

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3.2 Tech Stack – IBM

Component	Deployment option	Machine	Operating System	Software	Version Number
Oracle FLEXCUBE Universal Banking	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
				IBM WebSphere MQ Server	9.0.0.0
				Oracle Toplink	12.2.1.2.0
				Open Symphony Quartz	2.2.3
				Oracle WebCenter Content: Imaging	11.1.1.9.0
		Database Server	Oracle Enterprise Linux Server 6.6 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	12.2.0.1.0
		#Client Machines	Windows 7	Internet Explorer	Microsoft Internet Explorer Release (11.*)
				Mozilla Firefox	Mozilla Firefox Release(45+)
				Google Chrome	Google Chrome Release (55+)
			Windows 8	Internet Explorer	Microsoft Internet Explorer Release (11.*)
				Mozilla Firefox	Mozilla Firefox Release (47+)
				Google Chrome	Google Chrome Release (54+)
			Windows 10	Internet Explorer	Microsoft Edge
				Mozilla Firefox	Mozilla Firefox Release (47+)

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Component	Deployment option	Machine	Operating System	Software	Version Number
				Google Chrome	Google Chrome 1 Release(54+)
				Mozilla Firefox	Mozilla Firefox for Mac (50+)
			Mac OS X	Safari	Safari 9+
				Google Chrome	Google Chrome Release(55+)
Oracle FLEXCUBE Universal Banking Integration Gateway	Web services (incoming)	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
	HTTP Servlet (incoming)	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
	EJB (incoming)	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
	MDB (incoming)	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
				IBM WebSphere MQ Server	9.0.0.0
	Notifications (outgoing)	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
				IBM WebSphere MQ Server	9.0.0.0

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Component	Deployment option	Machine	Operating System	Software	Version Number
Oracle FLEXCUBE Universal Banking	Switch Integration Gateway	Integration Server		JDK	IBM JDK 1.8_64
Oracle FLEXCUBE Universal Banking ReST	Web services	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
				Oracle Toplink	12.2.1.2.0

Note: # Browser support is no longer based on Operating Systems but strictly tied to the browser themselves, no matter which Operating Systems they are installed on. Current release is certified on client workstations with Windows 7, 8, 10 and Mac OS X.

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4. Annexure – B: Third Party Software Details

Copyright Holder	Licensed Technology	Version
Apache	Commons Lang	3.5
Apache	Xerces2 Java	2.11.0
jsoup.org	Jsoup	1.10.3
Oracle	Java Transaction API (jta.jar)	1.1
Apache	Apache Commons Codec	1.1
Apache	Apache POI	3.16
Apache	commons-logging	1.2
The Apache Software Foundation	commons-beanutils	1.9.3
Apache	Apache Commons Transaction 1.2	1.2
Apache	Xerces2 Java	2.11.0
Apache	Apache XMLBeans	2.6.0
Yahoo	YUI Compressor	2.4.8
The Apache Software Foundation	Xalan-Java	2.7.2
Apache	Commons Collections	4.1
Apache	commons-io	2.5
Apache	Xalan	2.7.2
Apache	Ant	1.10.1
Apache	Log4J	2.8.2
Sean Owen	PJL Compressing Filter	2.2.0
QOS.ch	SLF4J	1.7.25
Apache	XML Commons Resolver	1.2
Apache	Velocity	2

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Copyright Holder	Licensed Technology	Version
OpenSymphony	Object-Graph Navigation Language (OGNL)	3.2.2
Apache	commons-net	3.6
MetaStuff, Ltd.	dom4j	2.0.1
Terracota	Quartz Job Scheduler	2.3.0

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5. Annexure – C: Module Code and Description

Module Code	Module Description
AM	Asset Management
ATM	Auto teller machine
BC	Bills & Collections
CASA	Current and Savings accounts
CD	Corporate Deposits
CE	Core Entities
CI	Islamic loans
CL	Consumer Lending
CN	Collection
CO (Core)	FLEXCUBE Core
CS	Core Services
DE	Data Entry
DL	Deposit locker
FT	Funds Transfer
FX	Foreign Exchange
IF	Interface
IT	Interactions
IV	Inventory
IZ	Islamic Securitization
LC	Letters of Credit
LD	Loans and Deposits
LE	Leasing

LI	Islamic letter of Credit
LQ	Liquidation Management
LS	Loan Syndication
MF	Micro Finance
MIS	Management Information System
MM	Money market
MO	Mortgages
OR	Origination
OT	Options
PC	Payments & Collections
RE	Nostro Reconciliation
RP	Relationship Pricing
SI	Standing Instructions
SW	Switch Gateway
TD	Term Deposit
WB	Web Branch
WF	Work Flow
XP	Expense Processing

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6. Annexure – D: Deprecated Functionality

Functionality deprecated in Oracle FLEXCUBE Universal Banking are;

- Limits and Collateral Management (LCM)
- Credit Line Origination

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