Product Release Note

Oracle FLEXCUBE Universal Banking

Release 14.1.0.0.0

May 2018

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FINANCIAL SERVICES

Product Release Note
May 2018
Version 14.1.0.0.0

Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax: +91 22 6718 3001
https://www.oracle.com/industries/financial-services/index.html

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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 14.1.0.0.0.

1.3 Abbreviations

Abbreviation	Description
BPEL	Business Process Execution Language
BPMN	Business Process Model and Notation
CASA	Current account and Savings Account
EOD	End of Day
KYC	Know Your Customer
SSO	Single Sign On
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UI	User Interface
XML	eXtensible Markup Language
PAD	Payments Accounts Directive
SBLC	Standby Letters of Credit
BIB	Bank IN Box
OD	Overdraft
LC	Letter of Credit
SFTP	Simple File Transfer Protocol
REST	REpresentational State Transfer
DB	Database
PII	Personally Identifiable Information

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

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1.4 Release Highlights

The rationale for the release of Oracle FLEXCUBE Universal Banking version 14.1.0.0.0 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.

- Product enrichments for French Africa Region
  - Float Days treatment for Value Date
  - Status movement for Central Bank Dormancy
  - Bank Level Group Status change for Loan and OD Accounts
  - Include Collateral Value in Provision calculation
  - Multiple Principal Schedules for Money Market Contracts
- Trade Enhancements
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- Enriching Origination Functionality
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  - Enhancement of Sub-stage Functionality in Origination
- Integration with external payment product processor for payment generation
- Exchange Rate handling in Term deposits
- Enabling Top up and Redemption of TD from different Branches
- Introducing Statement of Fees and Interest for Payment Account Directive (PAD)
- SWIFT 2019 Guarantees and Standby Letters of Credit changes
- Masking of Personally Identifiable Information (PII) fields
- Granular Access
- Right to Be Forgotten
- Account Netting and Local Limit Revaluation
- Auto Clear User Functionality
- REST Services Support
- DB Debug Logging into Tables
- Deferred Issues – New/Modified Features
- Deferred Issues – Extensible Conversion

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1.5 Release Enhancements

1.5.1 Product Enrichments for French Africa Region

Float Days Treatment for Value Date

- Option to handle value date treatment for various transactions introduced.
- Based on the float days maintained system would apply value date treatment for the transactions.
- Float days shall be added or deducted from the actual date of transactions based on the type of transactions. There is provision to handle holiday treatment also.
- This treatment would be applicable for interest calculation without affecting the available balance of the account.

Status Movement for Central Bank Dormancy

- 'Central bank dormant' status introduced for CASA accounts.
- Manages the movement of the account status from 'Active' to 'Dormant' to 'Central Bank Dormant' status.
- Based on the preference 'Central Bank Dormancy Days' maintained, it allows bank to manage the movement of accounts which are in 'Dormant' status to central bank dormant status.
- Enables account movement from 'Dormant' state to 'Active' State for non-financial transactions.

Bank Level Group Status Change for Loan and OD Accounts

- Group status change at bank level for loan and overdraft accounts has been brought in.
- Based on the rules maintained, all exposure contracts (irrespective of branches) under the same customer code will be moved to the worst account status.
- Changes are introduced to validate prompt payer at each stage for managing backward account status changes. System Defined elements are introduced which can leverage in the rule definition to obtain the effectiveness.

Include Collateral Value in Provision Calculation

- Loans/Overdraft availed with Bank guarantee as collateral, would consider the guarantee amount while loan provisions are calculated.
- Provision amount calculation to negate the provision basis amount (eg: Loan outstanding amount) with Bank Guarantee amount and then apply provision percentage based on the loan account status and its rule maintained.

Multiple Principal Schedules for Money Market Contracts

- Multiple schedules for Principal component has been brought in money market module, with support extending to borrowing and placement contracts during creation, amendment and rollover operations.
- Additionally, it has been enhanced to accept partial payment of the Principal component.

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1.5.2 Trade Enhancements

Usability Changes

- New Guarantee screens are introduced for processing Guarantee Issuance, Amendment and Transfer which support SBLC processing.
- Documentary Credit Issuance and Amendment screens are modified to restrict processing of the Guarantees.
- MT 700 / 707 message generations for SBLC will continue to support in Documentary Credit Issuance and Amendment screens.
- Once SR2019 changes for trade is enabled, system will not support generate MT 700 / 707 messages for SBLC. Only MT 760 / 767 messages will be generated for SBLC.
- Guarantee specific fields are removed from Documentary Credit screens.

Letter Of Credit – Processing of Amendment

- Amendments related to MT 707 / 767 messages can be triggered in respective amendment screens.
- Beneficiary confirmation required option moved from contract online screen to Amendment screen and each amendment can have option for beneficiary confirmation.
- Provision to collect amendment initiation charges available during AMNV event.
- Internal amendments to be processed from Documentary Credit and Guarantee contract online screens and MT799 will be generated.

Islamic Trade 360

- Islamic Trade 360 degree new screen allows to view Islamic trade finance transactions pertaining to corporate customers in various perspectives.
- Further outstanding balances can be viewed separately say Islamic Documentary Credit, Islamic Documentary Collection, Islamic Guarantees and Standby LCs, Trade Finance and Limits.

SWIFT 2018 Changes for Documentary Credit

- Documentary Credit Messages are enhanced to comply with SWIFT 2018 latest standards.
- System enhanced to allow modification of Applicant and Beneficiary details.
- MT 759 message generation will be supported.
- New fields are introduced in Documentary Credit Issuance, Amendment and Transfer screens to capture Special Payment conditions for Receiving Bank and Special Payment conditions for Beneficiary.

1.5.3 SEPA 2018 Changes

System is enhanced to validate if there is a Request for Recall by the Originator and if it falls within the period as maintained at Payments and Collection Preferences.

1.5.4　SWIFT 2018 – Non Trade Messages

Standard of existing MT messages has been enhanced to be in line with SR 2018 standard across categories 1,2 and 3 and Common group messages.

Messages mentioned below are enhanced to comply with SWIFT 2018 latest standards;

- Category 1　　　　　　　　　　　　: 　MT103, MT103 REMIT, MT103 STP
- Category 2　　　　　　　　　　　　: 　MT202,MT202 COV,MT205,MT205 COV
- Category 3　　　　　　　　　　　　: 　MT304
- Category n – Common Group Messages : 　MTn92,MTn96,MTn98

1.5.5　Sanction Check Enhancements

Sanction check requests can be sent for verification of the customer details. These requests can be sent for below listed entities on creation, modification and reopening of the same

- ➢ Customer Creation, Customer Address Maintenance
- ➢ Customer Account - Conventional and Islamic, Customer account address
- ➢ Term deposit/recurring deposit – Conventional and Islamic
- ➢ Cheque Book Maintenance
- ➢ Financial Inclusion Screen
- ➢ Origination Process Flows for Current, Savings, Corporate Customer and Term Deposit Creation
- ➢ Origination Process Flows for Retail Lending, Retail Islamic Finance and Corporate Islamic Finance
- ➢ Letter of Credit contract
- Facility to send Sanction Check requests to external system through queue and receive response from the external system through response queue
- System supports both synchronous and asynchronous mode of processing and also option of manual status changing for sanction check requests

1.5.6　Enriching Origination Functionality

Process Flow Enhancements

Conversion of process flows to BPMN makes the design intuitive and easy to understand without having much technical knowledge to design any process that shall proportionate into better operational efficiency

- The process flows of Current and Savings account opening, Corporate Customer Creation, Term Deposit Creation in BPEL are converted to BPMN.
- The new process flow will have the same set of stages as that of the BPEL process flow.
- Usability changes are done for Current and Savings account process flows.

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Enhancement of Sub-stage Functionality in Origination

- Changes are made so that System will allow the modification of the sub stage maintenance and restriction for maintaining first function id same as parent function id in sub stage has been relaxed.

- Modifications are done in the System to navigate all the subtask(s) under a stage once all subtasks are processed will then traverse next stage according to the original process flow.

1.5.7 Integration with External Payment Product Processor for Payment Generation

- Enhanced the system to integrate with external payment product processor for handling outgoing payments and for payment message generation.

- Settlement subsystem was generating SWIFT customer/bank transfer messages for PAYMENT_MESSAGE advice; it has been enhanced to create payment in external payment product processor.

- Consumer lending module was supporting SWIFT customer transfer for disbursement; it has been enhanced to create payment in external payment product processor.

- In following places Payment and collection module was used to send outgoing local payment, it has been enhanced to create local payment in external payment product processor

  ➢ Local clearing via Settlement subsystem for corporate modules
  ➢ Domestic Cash Transfer
  ➢ CL Disbursement
  ➢ TD redemption
  ➢ Account Closure via Multi Mode Settlements
  ➢ FATCA Tax referral processing

- In following places Funds Transfer module was used to send outgoing cross border payment, it has been enhanced to create payment in external payment product processor

  ➢ Branch screen for international cash transfer
  ➢ Netting for Foreign Exchange Module

- Oracle FLEXUCBE Universal Banking is integrated with Oracle Banking Payments out of the box for above cases.

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1.5.8 Exchange Rate Handling in Term deposits

- Changes are incorporated for Term Deposit Opening, Top up and Redemption transactions, where System would pick up the exchange rate based on the pay in/pay out mode, rate code and rate type combination from previous STANDARD, MID Rate.

- Account Class Maintenance has been enhanced for Term Deposits to capture exchange rate details. Applied FX Rate, Offset Amount and Offset Currency are introduced in Payin/Payout grid of Term Deposit operation's screens.

1.5.9 Enabling Top up and Redemption of TD from Different Branches

- Users are allowed to perform Top-up and Redemption of Term deposit from different branches. Term Deposit Top-up and Redemption has been enhanced to show accounts across all Branches.

- For Cash operations - Cash GL/Till from logged in branch will get updated.

1.5.10 Statement of Fees and Interest for Payment Account Directive (PAD)

- The system has been enhanced to provide Statement of fees and interest illustrating the fees levied and interest earned/paid on the account.

- Account Class Screen and Customer Account Screen have been enhanced to capture statement details. Also introduced is Charge Transaction Code Heading Maintenance.

- New batch built can be configured at End Of Day (EOD) which in turn would trigger report job that shall generate and spool Statement of fees for applicable accounts.

- New screen Statement of fees and interest is also introduced to generate/re-generate the Statement of fees and interest for a particular account and period.

1.5.11 SWIFT 2019 Changes for Guarantees and Standby Letters of Credit

- Guarantees and SBLCs messages upgraded to comply with SR2019 standards. Tag names, field option value, length of tag fields are enhanced in this aspect.

- Addition of new messages as part of SWIFT 2019 standard for
  - Guarantee/SBLC Issuance and Amendment Extension messages
  - Amendment Response message
  - Claim lodgement and Claim refusal messages

- Support below features for Guarantees and SBLCs
  - Conditional Guarantees and SBLCs
  - Counter Guarantees and Local Guarantees
  - Transferrable Guarantees
  - Claim processing based on MT765. Restriction of multiple claims
  - Advice and Confirm feature
  - Cancellation through Guarantee amendment

1.5.12 Masking of PII fields

- Scoped function Id's are enhanced to display Personally Identifiable Information (PII) in masked or unmasked form depending on the user preference.

- Masking Personally Identifiable Information is based on the policies created in database.

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1.5.13 Granular Access

- Customer and Customer Account maintenance, transactions restricted to users based on the access group restriction attached at user level for the scoped function id's.
- User will not be able to query, view, create or amend data based on access group restriction.

1.5.14 Right to Be Forgotten

- Personally Identifiable Information of both closed Users and Customers are permanently anonymized.
- Once PII information is permanently anonymized corresponding Users and Customers cannot be queried from application.
- Two options available for "Right to Be Forgotten", one is based on number of days to forget customer and other is based customer request.

1.5.15 Account Netting and Local Limit Revaluation

- The System has been enhanced to maintain an account netting structure with the list of accounts for which the balance is to be netted. In addition to that, Temporary Overdraft Limit and a Local facility can be attached. The limits check during accounting would then look at the collective balance across all accounts with the limit amount attached at the netting structure level.
- New screen - Limits Revaluation Input (STDLMRVL) and web-service has been introduced to post revaluation entries for the local limits from Limits system. In case of No-ELCM, the revaluation adjustment can be calculated and posted manually through UI.

1.5.16 Auto Clear User Functionality

System would support clearing the logged in user by the same user on successive login. Based on feature setup, user can auto clear on login or use the existing CLRU screen. If the same user is trying to login again System would prompt a message .On accepting the message System will clear the old login and the user would be allowed to login.

1.5.17 REST Services Support

Support for REST Service is enhanced to all modules through ODT .In ODT user can opt for which REST services are required, ODT automatically generate REST artefacts for Function IDs opted .These REST Services can be deployed into the application.

1.5.18 DB Debug Logging into Tables

Enhancement done to support the logging of database debugs into tables. Based on parameter, either table level logging or file level logging can be enabled.

1.5.19 Deferred Issues – New/Modified Features

Bills and Collections

- System is enhanced to handle the reversal of penalty interest accrued whilst extending the maturity date of an expired contract. By, doing so, System will compute and collect the normal interest for the extended tenor.

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- System is enhanced to refund the excess collateral to the customer during liquidate using collateral operation.

Origination

- System is enhanced to handoff documents from Origination to the related core modules (Customer, Customer Accounts, and Consumer Lending Account)
- An additional queue – Standard > Search has been introduced. This queue configuration reflects the tasks to be searched in Task-Search. Client can restrict the tasks that are displayed in the task-search according to their requirement.

Branch/Teller

- Teller screen - Deposit Locker Rental Payment by Cash (3401) – Has been enhanced to support Rental Payment by Cash when Settlement details are not maintained for the Deposit Locker contracts. Charges sub-system added to the screen to collect teller level charges.
- In Teller BC and DD Issue/Reissue Transactions, Instrument number will be populated at the final stage of the transaction. In other stages and during Pickup/Enrich, the instrument number field will be shown as empty.

Consumer Lending

- Consumer lending contract input screen is enhanced to have Message Preview option for unauthorized accounts.

CASA

- Quick Customer Addition screen is enhanced to Support Islamic Account Creation along with inclusion of two Islamic specific fields "Contribute to PDM" and "Exclude from Distribution".
- New Islamic Account notification codes, notification functions have been created similar to conventional notifications.
- New Upload mechanism is provided to migrate the CASA Acquired Interest from legacy System to Oracle FLEXCUBE through excel upload .

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1.5.20 Deferred Issues – Extensible Conversion

Following Screens are converted from Non-Extensible to Extensible screens

Function Description	Non Extensible Function	Extensible Function
Consumer Lending Ad hoc Charge Type	CLDADCMT	CLDADCHT
Consumer Lending Renegotiation	CLDRENOG	CLDRENGT
Consumer Lending User Defined Events Triggering	UDDCLEVT	UDDCLETR
Consumer Lending Check List Maintenance	CLDCHKMT	CLDXCKMT
Consumer Lending Consolidated Rollover	CLDCROLL	CLDCNROL
Consumer Lending Reassignment	CLDNOVDT	CLDCRASG
Consumer Lending Split Rollover	CLDSROLL	CLDSPROL
Corporate Deposits Contract Input	LDDCONON	CDDTRONL
Corporate Deposits Payment Input	LDDPMNT	CDDPMNT
Corporate Deposits Payment Simulation	LDDSIMPT	CDDSIMPT
Corporate Deposits Value Dated Changes Simulation	LDDSIMVD	CDDSIMVD
Corporate Deposits Simulation Contract Input	LDDSIMON	CDDSIMON
Corporate Deposits Value Dated Changes Input	LDDVAMND	CDDVAMND
Customer Projections Query	ACDSQPRO	ACDCUPRQ
Customer Asset and Liability Query	ACDSQASL	ACDCUALQ

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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 and Installer Kit
- User and Installation manuals – https://docs.oracle.com/cd/E94300_01/index.htm
- Online Help Files

2.2 Software Components

Software Components of Oracle FLEXCUBE 14.1.0.0.0 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
- Tools
  - ODT
  - OFT

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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 7.6 (x86 64 Bit)	Oracle Fusion Middleware Infrastructure	12.2.1.4.0
				Java HotSpot(TM) JDK (with WebLogic Application Server)	JDK 1.8 Update 241
				Open Symphony Quartz	2.3.2
				Oracle Toplink	12.2.1.4.0
		Document Management System	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle WebLogic	12.2.1.4.0
				JDK	JDK 1.8 Update 241
				Oracle Database (for RCU)	19.6.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle WebCenter Content Imaging	12.2.1.4.0
		Database Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	19.6.0.0.0
		Reporting Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle WebLogic	12.2.1.4.0
				JDK	JDK 1.8 Update 241
				Oracle Database (for RCU)	12.2.0.1.0

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				Repository Creation Utility	12.2.1.3.0
				Oracle BI Publisher	5.5.0
		FLEXCUBE Information Server – Analytics	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle WebLogic	12.2.1.4.0
				JDK	JDK 1.8 Update 241
				Oracle Database (for RCU)	19.6.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle Business Intelligence Enterprise Edition (OBIEE)	5.5.0
		FLEXCUBE Information Server - Data warehouse	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle Golden Gate	19.1.0.0.4
				Oracle Database (for RCU)	19.6.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle Data integrator	12.2.1.4.0
				Oracle Data integrator Java EE Agent	12.2.1.4.0
				Oracle WebLogic Server Infrastructure	12.2.1.4.0
		Client Machines#	Windows 10	Internet Explorer	Internet Explorer (11+)
				Mozilla Firefox	Mozilla Firefox Release (66+)
				Google Chrome	Google Chrome Release (73+)
				Microsoft Edge	Microsoft Edge 44+
			Mac OS X	Mozilla Firefox	Mozilla Firefox for Mac (62+)
				Safari	Safari 12+

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				Google Chrome	Google Chrome Release (73+)
		Single Sign On Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	JDK	JDK 1.8 Update 241
				Oracle WebLogic	12.2.1.4.0
				Repository Creation Utility	12.2.1.4.0
				Oracle Identity Management	12.2.1.4.0
				Oracle SOA	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
				OID Connector	OID 11.1.1.6.0
	UI Decentralized branch	Branch Application Server – Decentralized	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	JDK	1.8 Update 241
				Oracle WebLogic Server	12.2.1.4.0
		Database Branch for Decentralized mode		Oracle RDBMS Standard Edition (SE2)	19.6.0.0.0
Oracle FLEXCUBE Universal Banking BPEL/BPMN Processes and Process Framework	UI-Host and Centralized	Application Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	JDK	1.8 Update 241
				Oracle WebLogic Server	12.2.1.4.0
				Oracle Database (for RCU)	19.6.0.0.0
				Repository Creation Utility	12.2.1.4.0
				Oracle SOA Suite, Oracle BPM Suite	12.2.1.4.0
Oracle FLEXCUBE	Web services (incoming)	Integration Server	Oracle Enterprise	Oracle WebLogic Server	12.2.1.4.0

Universal Banking Integration Gateway	HTTP Servlet (incoming)		Linux Server 7.6 (x86 64 Bit)		
	EJB (incoming)				
	MDB (incoming)				
	Notifications (outgoing)				
Oracle FLEXCUBE Universal Banking Switch Integration Gateway	Switch Integration Gateway	Integration Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	JDK	1.8 Update 241
Oracle FLEXCUBE Universal Banking REST	Web services	Integration Server	Oracle Enterprise Linux Server 7.3 (x86 64 Bit)	JDK	1.8 Update 241
				Oracle WebLogic Server	12.2.1.4.0
				Oracle Toplink	12.2.1.4.0

Note: # Browser support is no longer based on Operating Systems but strictly tied to the browser themselves, no matter on which Operating Systems they are installed. 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 7.6 (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
				Open Symphony Quartz	2.3.2
		Database Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	19.6.0.0.0
		Client Machines#	Windows 10	Internet Explorer	Microsoft Edge(11+)
				Mozilla Firefox	Mozilla Firefox Release (66+)
				Google Chrome	Google Chrome Release (73+)
			Mac OS X	Mozilla Firefox	Mozilla Firefox for Mac (62+)
				Safari	Safari 12+
				Google Chrome	Google Chrome Release(73+)
Oracle FLEXCUBE Universal Banking Integration Gateway	Web services (incoming)	Integration Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
	HTTP Servlet (incoming)			IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0

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Component	Deployment option	Machine	Operating System	Software	Version Number
	EJB (incoming)			IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
	MDB (incoming)			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)			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 FLEXCUBE Universal Banking	Switch Integration Gateway	Integration Server		JDK	IBM JDK 1.8_241
Oracle FLEXCUBE Universal Banking REST	Web services	Integration Server	Oracle Enterprise Linux Server 7.6 (x86 64 Bit)	IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64)	9.0.0.0
				Oracle Toplink	12.2.1.4.0

Note: # Browser support is no longer based on Operating Systems but strictly tied to the browser themselves, no matter on which Operating Systems they are installed. 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	Apache Commons Codec	1.11
Apache	Apache Commons Transaction	1.2
Apache	Apache POI	3.17
Apache	Commons Collections	4.1
Apache	Commons IO	2.6
Apache	Commons Lang	3.5
Apache	Commons Net	3.6
Apache	Log4J	2.10.0
Apache	Velocity	2
Apache	ant	1.10.1
The Apache Software Foundation	commons-beanutils	1.9.3
Apache	commons-logging	1.2-ca94655
JCraft	JSch	0.1.54
Oracle	Java Transaction API (jta.jar)	1.1
OpenSymphony	OGNL	3.2.2
Sean Owen	PJL Compressing Filter	2.3.0
Terracota	Quartz	2.3.1-9f9e400
Yahoo	YUI Compressor	2.4.8-958491d
FasterXML, LLC	jackson-annotations	2.9.5
FasterXML, LLC	jackson-core	2.9.5
FasterXML, LLC	jackson-databind	2.9.5
jsoup.rg	jsoup	1.10.3

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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
CO (Core)	FLEXCUBE Core
CS	Core Services
DE	Data Entry
IF	Interface
IT	Interactions
IV	Inventory
LC	Letters of Credit
LD	Loans and Deposits
LE	Leasing
LI	Islamic letter of Credit
LQ	Liquidation Management
MF	Micro Finance
MIS	Management Information System
MM	Money market
MO	Mortgages
OR	Origination
OT	Options
RE	Nostro Reconciliation
RP	Relationship Pricing
SI	Standing Instructions
SW	Switch Gateway
TD	Term Deposit
WB	Web Branch
WF	Work Flow
XP	Expense Processing
PC	Payment and collection
FT	Fund Transfer

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6. Annexure – D: Deprecated Functionality

- Feature of payment message generation from all the business modules has been deprecated. This was earlier achieved through IS module or integration with PC/FT. From this release, payment message generation has been routed to external payment product processor.
  - This change has not been implemented for FT/PC modules, and FT/PC modules would continue to generate payment messages.
- Oracle FLEXCUBE General Ledger (FGL) has been deprecated.
- Oracle FLEXCUBE Millionaire Certificate module (MB) has been deprecated.

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