

Product Release Notes
Oracle FLEXCUBE Investor Servicing
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Product Release Notes
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Version 14.0.0.4.3

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1. Release Notes

1.1 Background

Oracle Financial Services Software Limited has developed a mutual fund automation solution, Oracle FLEXCUBE Investor Servicing that enables mutual fund companies to create a distributed network of branches for effective marketing and efficient handling of unit holder transactions. Oracle FLEXCUBE Investor Servicing 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 highlight the enhancements in Oracle FLEXCUBE Investor Servicing 14.0.0.0.0

1.3 Abbreviations

| Abbreviation | Description |
|--------------|------------------------------------|
| FCIS | Oracle FLEXCUBE Investor Servicing |
| FMG | Fund Manager |
| UH | Unitholder |
| UT | Unit Trust |
| PA | Pension Administrator |

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

1.4 Release Highlights

The scope of the current release Oracle FLEXCUBE Investor Servicing 14.0.0.0.0 is to develop the new Component Oracle FLEXCUBE Investor Servicing for Pension Funds is to focus on contribution handling/record keeping for pensions. Primary focus area of the pension funds will be occupational pensions along with some of the products whose business needs align closely with occupational pension and personal pension administration.

This release also focused on technical qualification to comply with approved Tech Stack along with data privacy features and forward porting of applicable fixes related to incidences reported in previous versions.

1.5 Oracle FLEXCUBE Investor Servicing for Pension Funds

This module supports solution for handling occupational pension and personal pension administration. Following features are available in the system.

- Support for maintaining Employer sponsored / Master Trust schemes
- Facility to maintain scheme level parameterization on contribution/withdrawal related rules
- Support for recording mandatory employer / employee contributions via upload file with validations
- Support for pension related transfers/ early withdrawals/ switches/ maturity
- Investment account to hold multiple portfolios, including direct UT investments
- Frequency/ lifetime based investment & withdrawal limits
- Single instruction to transact into multiple investment products (including direct UT investments)
- Support for enquiries/statements

Integrations / Interface: Investor Servicing for Pension funds supports the following integrations/Interfaces

- Integrated with mutual fund module of Oracle FLEXCUBE Investor Servicing for processing
- Facility to update balance/positions from external system for held-away assets
- Facility to upload assets from external system
- Support for recording mandatory employer/employee contributions via upload file with validations.

1.6 Enhancements to existing modules

1.6.1 Multifactor Authentication (MFA)

- Introduced Framework to support Multifactor Authentication to integrate with any third party MFA solution provider.
- Two new fields (MFA Applicable and MFA ID) introduced in User Maintenance screen to support MFA.
- On successful login using Application user ID details, the system will prompt new MFA screen with Multi Factor ID defaulted. User need to input Multi Factor PIN to authenticate.
- MFA authentication status will appear on home page after successful login.

1.6.2 Data Masking

System enhanced to support to data privacy/ masking feature. All data which are marked as Personally Identifiable information need to be masked for the Application User as per their configuration in user maintenance screen.

- **Pseudonymization Data Masking:** System enhanced to support masking /unmasking Personal Identifiable Information for the Application users as per user access configuration.
- **Anonymization Data Masking:** System enhanced to support masking of Personal Identifiable Information from production environment before moving to other environment. System enabled to Mask Personal Identifiable Information in Database permanently.

1.6.3 Encryption

System is qualified with Transparent Data Encryption feature. This automatic encryption-decryption capability at the database layer makes the solution transparent to database applications. Access controls that are enforced at the database and application layers remain in effect.

1.6.4 Long term Data Store (LDS)

LDS, an archival solution, enables user to reduce the size of production data by moving passive historical data into long term data store. Only active data is retained in production data store. User can define the data retention period for production environment. The historical data stored in LDS can be accessed seamlessly through same application.

2. Components of the Software

2.1 Documents accompanying the software

The various documents accompanying the software are as follows:

- Release Note
- Installer Kit
- User Manuals and Installation manuals can be accessed from http://docs.oracle.com/cd/E94389_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:

- Application Server
 - Java Sources
 - UI Components (JS, XML)
 - Reporting Components (Data models (xdmz), Reports (xdoz))
 - Process Framework components (BPEL)
- Database Server
 - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- Gateway
 - Java application layer
 - Java Source
 - Configuration files used for deployment
 - Messaging layer
 - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
 - Services
 - The WSDL files for the service supported
 - The XSDs of the messages involved
 - The service documents – describing the services
- Adapters
 - IS-UBS

- FCIS MDB Adapter
 - UI Components (JS, XML)
 - Java sources
 - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- FCIS Callout Adapter
 - Java sources
 - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- FCIS Insulation Adapter
 - Java sources
 - Stored Procedures (Packages, Functions, Procedures, Triggers, Views)
- Installation utilities
 - UI and Script based installation for Application Server, Database Server and Gateway
 - Installation documents for
 - FCIS Application Deployment
 - Gateway
- Online Help Files

3. Annexure – A: Environment Details

3.1 Tech Stack – Oracle

| Component | Deployment option | Machine | Operating System | Software | Version Number |
|------------------------------------|-------------------------|--|---|---|--|
| Oracle FLEXCUBE Investor Servicing | UI-Host and Centralized | Application Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle Fusion Middleware Infrastructure (or) Oracle WebLogic Server | 12.2.1.3.0 |
| | | | | Java HotSpot(TM) JDK (with WebLogic Application Server) | JDK 1.8 Update 202 |
| | | | | Oracle Platform Security Services | 12.2.1.3.0 |
| | | | | Open Symphony Quartz | 2.3.1-ad5302c |
| | | Database Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle RDBMS Enterprise Edition | 18.3.0.0.0 |
| | | Document Management System | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle WebLogic Server | 12.2.1.3.0 |
| | | | | Oracle WebCenter Content Imaging | 12.2.1.3.0 |
| | | Reporting Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle BI Publisher | 12.2.1.4.0 |
| | | | | Java HotSpot(TM) JDK (with WebLogic Application Server) | JDK 1.8 Update 202 |
| | | Oracle FLEXCUBE Information Server – Analytics | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle Business Intelligence Enterprise Edition (OBIEE) | 12.2.1.4.0 |
| | | | | Java HotSpot(TM) JDK (with WebLogic Application Server) | JDK 1.8 Update 202 |
| | | Client Machines | #Supported Browsers | Internet Explorer | Microsoft Internet Explorer Release (11.*) |
| | | | | Mozilla Firefox | Mozilla Firefox Release(64+) |

| | | | | | |
|--|--------------------------|-----------------------|---|---|---------------------------------|
| | | | | Google Chrome | Google Chrome Release(73+) |
| | | | | Microsoft Edge | Microsoft Edge (41.16299.15) |
| | | | | Safari | Safari 11+ |
| | | Single Sign On Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | JDK | JDK 1.8 Update 202 |
| | | | | Oracle Fusion Middleware Infrastructure | 12.2.1.3.0 |
| | | | | Oracle Identity And Access Management | 12.2.1.3.0 |
| | | | | Oracle Identity Management(OID) | 12.2.1.3.0 |
| | | | | Oracle SOA | 12.2.1.3.0 |
| | | | | OID Connector | OID 11.1.1.6.0 |
| Oracle FLEXCUBE Investor Servicing BPEL/BPMN Processes and Process Framework | UI-Host and Centralized | Application Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle Fusion Middleware Infrastructure | 12.2.1.3.0 (JDK 1.8 Update 202) |
| | | | | Oracle SOA Suite, Oracle BPM Suite | 12.2.1.3.0 |
| Oracle FLEXCUBE Investor Servicing Integration Gateway | Web services (incoming) | Integration Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle Fusion Middleware Infrastructure (or) Oracle WebLogic Server | 12.2.1.3.0 |
| | HTTP Servlet (incoming) | | | | |
| | EJB (incoming) | | | | |
| | MDB (incoming) | | | | |
| | Notifications (outgoing) | | | | |

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, 10 and Mac OS X.

3.2 Tech Stack – IBM

| Component | Deployment option | Machine | Operating System | Software | Version Number |
|--|--------------------------|--------------------|---|--|--|
| Oracle FLEXCUBE Investor Servicing | UI-Host and Centralized | Application Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64) | 9.0.0.10 |
| | | | | IBM WebSphere MQ Server | 9.0.4.0 |
| | | | | Open Symphony Quartz | 2.3.1-ad5302c |
| | | Database Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | Oracle RDBMS Enterprise Edition | 18.3.0.0.0 |
| | | Client Machines | #Supported Browsers | Internet Explorer | Microsoft Internet Explorer Release (11.*) |
| | | | | Mozilla Firefox | Mozilla Firefox Release(64+) |
| | | | | Google Chrome | Google Chrome Release(73+) |
| | | | | Microsoft Edge | Microsoft Edge (41.16299.15) |
| | | | | Safari | Safari 11+ |
| Oracle FLEXCUBE Investor Servicing Integration Gateway | Web services (incoming) | Integration Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64) | 9.0.0.10 |
| | HTTP Servlet (incoming) | | | | |
| | EJB (incoming) | | | | |
| | MDB (incoming) | Integration Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64) | 9.0.0.10 |
| | | | | IBM WebSphere MQ Server | 9.0.4.0 |
| | Notifications (outgoing) | Integration Server | Oracle Enterprise Linux Server 7.4 (x86 64 Bit) | IBM WebSphere Application Server with inbuilt JVM (IBM JDK 1.8_64) | 9.0.0.10 |
| | | | | IBM WebSphere MQ Server | 9.0.4.0 |

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, 10 and Mac OS X.

4. Annexure – B: Third Party Software Details

- For information on the third party software details, refer the latest Oracle FLEXCUBE Investor Servicing License Guide

5. Annexure – C: Module Code and Description

| Abbreviation/ Acronym | Meaning |
|-----------------------|------------------------------------|
| FCIS | Oracle FLEXCUBE Investor Servicing |
| SMS | Security Management System |
| LEP | Life and Endowment Product |
| UT | Unit Trust |
| PA | Pension Administrator |