

# **Oracle Banking Multi-Entity Deployment Guide**

## **Oracle Banking Branch**

Release 14.5.0.3.0

**Part Number F54352-01**

February 2022

---

# Table of Contents

- 1. PREFACE..... 1-1
  - 1.1 INTRODUCTION ..... 1-1
  - 1.2 AUDIENCE..... 1-1
  - 1.3 DOCUMENTATION ACCESSIBILITY ..... 1-1
- 2. OVERVIEW ..... 2-1
  - 2.1 DEPLOYMENT DIAGRAM..... 2-1
  - 2.2 ENTITY CREATION ..... 2-3
    - 2.2.1 Default Entity Creation ..... 2-3
    - 2.2.2 New Entity Creation ..... 2-3

---

# 1. Preface

## 1.1 Introduction

This guide describes the approach that could be considered as a reference, while moving into multi-entity model.

## 1.2 Audience

This guide is intended for WebLogic admin or ops-web team who are responsible for installing the OFSS banking products.

## 1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>

## 2. Overview

Banks may have multiple implementations across geographies that necessitates the need to support multiple entities.

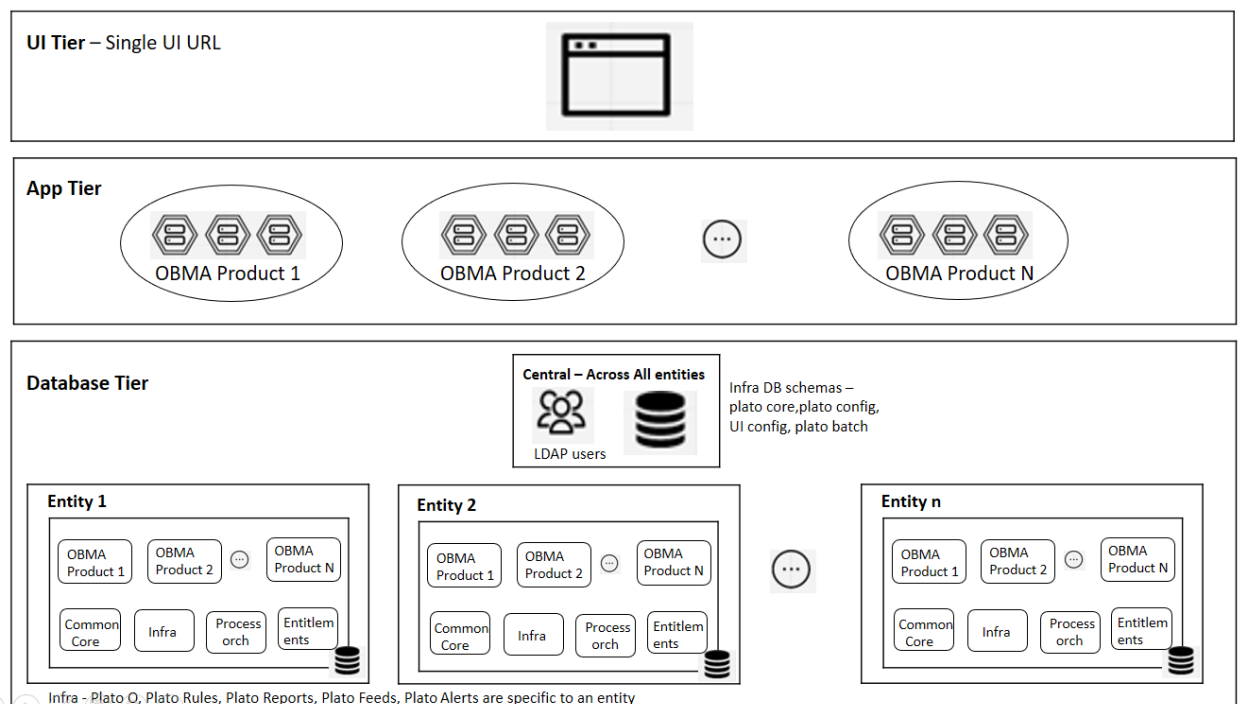
**Multi Entity** feature, introduced in Oracle Banking Microservices Architecture products, will enable a single instance of the product (and the underlying Oracle Banking Microservices Architecture platform) to onboard multiple entities of the bank onto the platform.

As part of **Multi Entity** feature, the below are the functionalities that will be supported in all Oracle Banking Microservices Architecture products.

- Creation of "Multi-Entity Admin" user(s)
- Entity Definition and Maintenance
- Creation of "Entity Admin" User(s) & regular Users
- Mapping of users (entity admins or regular users) to one or more entities - The users of the application will be central in nature and users can have access to one or more entities.
- User Entitlement will be local to the entity

### 2.1 Deployment Diagram

Deployment diagram depicts multi-entity based deployment model. Entities based on geographies are considered as an example in the deployment diagram.



**UI Tier** – UI Domain will be shared across multiple entities for a bank and so same UI URL will be used.

A user can be mapped to one or more entities and a single home entity. During login, user will be logged into to the home entity and an option would be provided to switch to any of the other associated entities.

Multi Entity admin user has the special access to create/modify new entities in the system.

**App Tier** – One or more managed servers that host all the microservices that are to be deployed for a product

This includes

- Infrastructure services – Plato Infra services (Plato Discovery, Plato API Gateway, Plato Batch, etc...) that are used across all products
- SMS service – for Role Based Authorization
- Common Core and Mid-office Common core services - Common domain related services that are used across by one or more products
- Domain services – micro-services related to Oracle Banking Microservices Architecture products (Oracle Banking Trade Finance Process Management, Oracle Banking Credit Facilities Process Management, Oracle Banking Liquidity Management, Oracle Banking Virtual Account Management, etc...)

Same as UI tier, App tier will also be shared across multiple entities. Based on the entity id provided in the request header, DB schema to the entity will be accessed for all CRUD operations.

**Database Tier** – The segregation of entities should be done in the DB layer. Separate DB schemas should be defined and used for the entities.

Below are shared across multiple entities

- LDAP users
- few infrastructure related DB schemas - Plato Config, Plato UI config, Plato core, and Plato Batch

Below schemas will NOT be shared and should be specific to an entity

- Infra related schemas - Plato O, Plato Rules, Plato Reports, Plato Feeds, and Plato Alerts
- User entitlements – SMS schema
- Common core schema
- Product specific DB schemas (each product will have multiple schemas; ideally 1 schema per microservice/sub-domain)

Banks that have a single entity should also follow the same architecture but with "DEFAULT\_ENTITY" configured in the system.

## 2.2 Entity Creation

### 2.2.1 Default Entity Creation

During environment setup, when microservices are deployed, DMLs/DDLS related to “DEFAULT\_ENTITY” will be executed through flyway scripts.

Multi entity Admin user should be created as mentioned in **Section 7.3 of Oracle Banking Microservices Platform Foundation Installation Guide**.

### 2.2.2 New Entity Creation

Multi entity admin users have the rights to create/modify entities that are to be created for the bank.

Refer to **Multi Entity Maintenance** section in **Oracle Banking Common Core User Guide** for creating new entities.

Before creating new entities through the application, DB schemas corresponding to various domains should be identified and corresponding “Data Sources” should be created in weblogic server.

Data Sources (Filtered - More Columns Exist)				
New Delete				
<input type="checkbox"/>	Name	Type	JNDI Name	Targets
<input type="checkbox"/>	CMCE1	Generic	jdbc/CMCE1	cmc_server1, cmc_server2
<input type="checkbox"/>	CMNCORE	Generic	jdbc/CMNCORE	cmc_server1, cmc_server2
<input type="checkbox"/>	PLATO	Generic	jdbc/PLATO	cmc_server1, cmc_server2
<input type="checkbox"/>	PLATO_UI_CONFIG	Generic	jdbc/PLATO_UI_CONFIG	cmc_server1, cmc_server2
<input type="checkbox"/>	SMS	Generic	jdbc/sms	cmc_server1, cmc_server2
<input type="checkbox"/>	SMSE1	Generic	jdbc/SMSE1	cmc_server1, cmc_server2
New Delete				

Once the Data Sources are mapped with the corresponding DB schemas and servers, restart the PLATO, CMC, SMS, and other required managed servers.

Check and verify in Eureka to see if all the services are up and running.

Login to the application as an entity admin user and proceed with entity creation. Select the required application id and map it with the new JNDI configured in weblogic.

Entity Id *	Entity Name *	HO Branch Code *	HO Branch Name *
ETEST	ENTITYTEST	LMB	LM Branch
Ho Branch Address *	Host Code *	Country *	Current HO Branch Posting Date *
Bangalore	HOST1	India	Aug 4, 2021
Previous HO Branch Posting Date *	Next HO Branch Posting Date *	Bank Name *	Bank Code *
Aug 19, 2021	Aug 20, 2021	LM BANK	0020
Application JNDI Mapping			
<input type="checkbox"/>	Application Id	JNDI	
<input type="checkbox"/>	CMNCORE	jdbc/CMCE1	
<input type="checkbox"/>	sms	jdbc/SMSE1	
<input type="checkbox"/>	LMM	jdbc/LMME1	
Page 1 of 1 (1-3 of 3 items) < 1 >			

As shown in the above snapshot, as part of entity creation through app-shell, JNDI names for each of the applications should be provided.

When the multi entity admin create an entity on click of the “Save” button in “Create Entity” screen, the following processes will execute in the background

- The entity details will be saved in the PLATO\_TM\_ENTITY table.
- The JNDIs will be saved in the APPLICATION\_LEDGER table.
- The flyway scripts for all the micro services will get executed in their respective schemas.
- Once the flyway execution is completed a new role “ENTITY\_ADMIN” will be created in the entity. This step will insert scripts into the following tables:
  - SMS\_TM\_ROLE
  - SMS\_TW\_ROLE
  - SMS\_TM\_ROLE\_ACTIVITY
  - SMS\_TW\_ROLE\_ACTIVITYThis role will be assigned to the entity admin user in the user creation step.
- The Head Office branch details will be inserted into the CMC\_TM\_CORE\_BRANCH and CMC\_TW\_CORE\_BRANCH tables.
- The Bank details will be inserted into the CMC\_TM\_CORE\_BANK and CMC\_TW\_CORE\_BANK tables.
- The System dates will be inserted into the CMC\_TM\_SYSTEM\_DATES and CMC\_TW\_SYSTEM\_DATES tables.

Once after confirming that the relevant DB entries are added as per above, Day-0 scripts should be run manually for each of the entities created through UI.



## **Oracle Banking Multi-Entity Deployment Guide**

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>

Copyright © 2021,2022, Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.