Oracle Banking Multi-Entity Deployment Guide

Oracle Banking Liquidity Management

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Table of Contents

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.

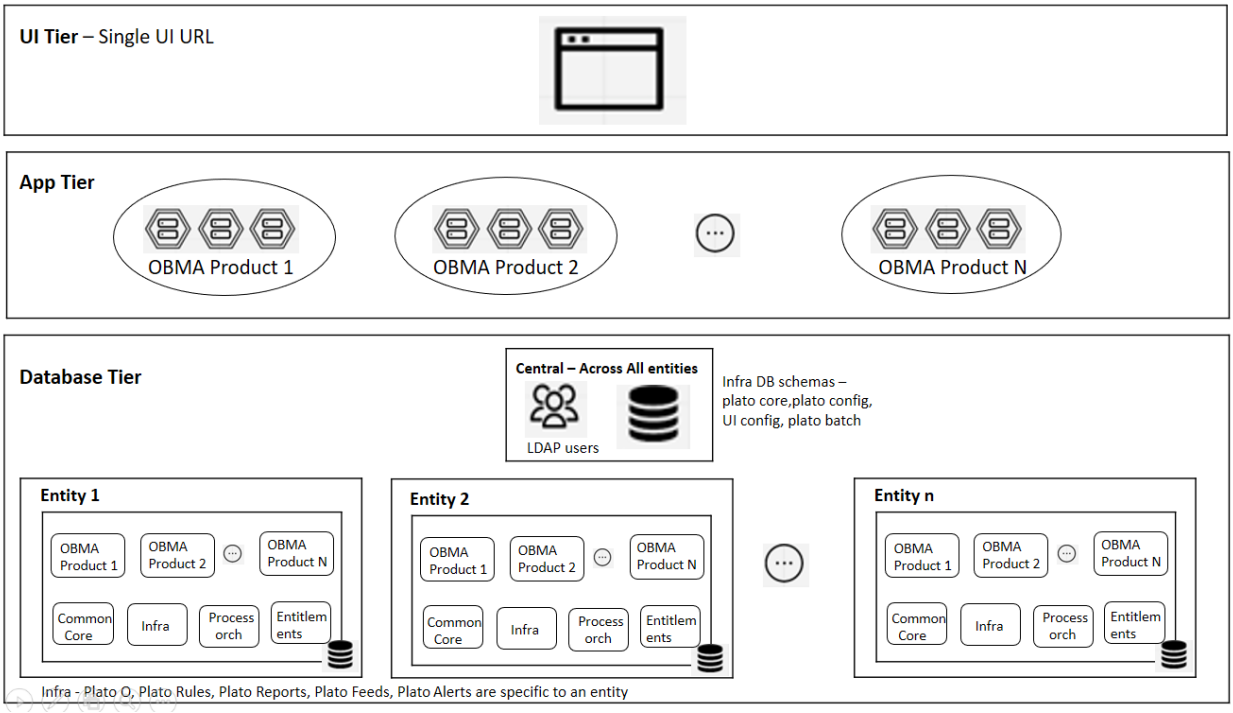
Multi Entity feature, introduced in Oracle Banking Microservices Architecture products, will enable a single instance of the product (and the underlying Oracle Banking Microservices Architecture platform) to onboard multiple entities of the bank onto the platform.

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.

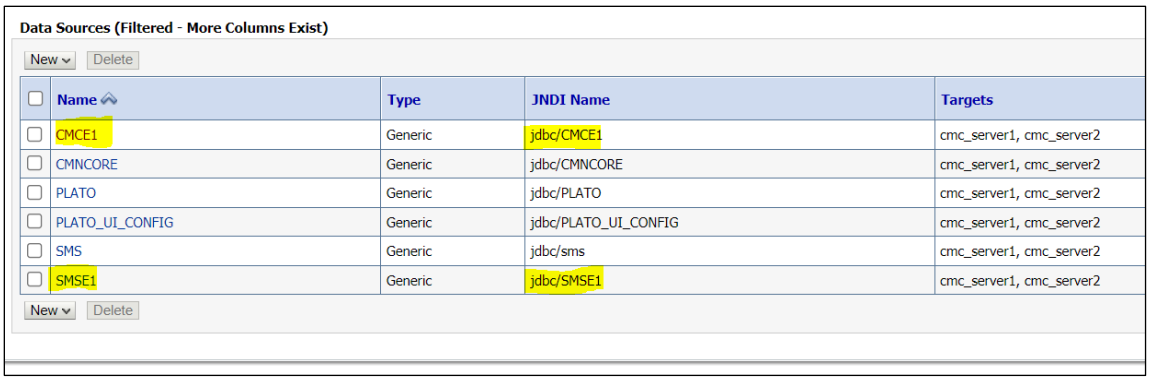
Multi entity Admin user should be created as mentioned in **Section 7.3** of **Oracle Banking Microservices Platform Foundation Installation Guide**.

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.

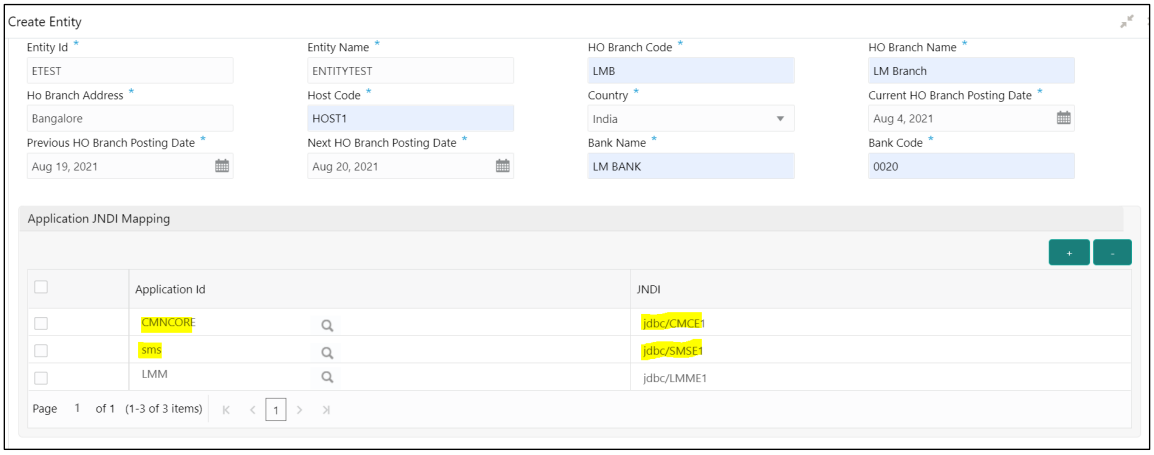
Before creating new entities through the application, DB schemas corresponding to various domains should be identified and corresponding “Data Sources” should be created in weblogic server.



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.



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_ACTIVITY

  This 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.

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