Services Installation Guide
Oracle Banking Supply Chain Finance
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FINANCIAL SERVICES

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Services Installation Guide

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1. Preface

1.1 Introduction

This guide would help you to install the Oracle Banking Supply Chain Finance services on designated environment. It is assumed that all the prior setup is already done related with WebLogic installation, WebLogic managed server creation and Oracle DB installation.

It is recommended to use dedicated managed server for each of the Oracle Banking Supply Chain Finance services.

1.2 Audience

This document 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.

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2. Domain and Cluster Configuration

2.1 Plato Infrastructure Domain Configuration

2.1.1 Prerequisites

- Machine should have Java JDK installed.
- Oracle Fusion Middleware must be installed on the machine.
- Oracle Banking Microservices Architecture, SMS and Common core deployments are up and running. (Required).

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*Note: For the exact version to be installed, refer to the **Annexure – A: Environment Details** section in Release Notes.*

2.1.2 Domain Creation and Configuration

It is recommended to have different managed server in one domain for each application. For Creating Domain and Configuration, refer to **Create Domain and Cluster Configuration** section in **Configuration and Deployment Guide**.

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3. Database Setup

3.1 Introduction

In this section you are going to setup database related configuration for Oracle Banking Supply Chain Finance Installation.
Before you proceed with the document, ensure Schema's are being created. It is recommended to have different schema for each application.

3.2 Database Schema Creation

*Note: For creating database schemas, refer to **Database Schema Creation** section in **Configuration and Deployment Guide**.*

Create the following database schemata. Schema Names mentioned below are recommended, but not mandatory.

Database Schema Names
PLATO
PLATO_UI_CONFIG
PLATO_SECURITY
PLATO_FEED
PLATO_REPORT_SERVICE
PLATORULE
PLATO_BATCH
COMMON_CORE
PLATOALERTS
PLATO_TRANSPORT
PLATOORCH
PLATO_PASSWORD
SMSCD0
OBSCFCM_ACCOUNTING
OBSCFCM_ALERTS
OBSCF_BATCH
OBSCFCM_CHARGES
OBSCFCM_CORE_SERVICES
OBSCFCM_FILTER
OBSCFCM_INSTRUMENTS
OBSCFCM_RECON
OBSCFCM_REPORT
OBSCFCM_WORKFLOWS_CONDUCTOR
OBSCFCM_MASTER_MAINTENANCE
OBSCFCM_FILE_PROCESSING
OBSCF_CORE

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Database Schema Names
OBSCF_FINANCE
OBSCF_LIMIT_UTILIZ
OBSCF_REPORT
OBSCF_FCI_MESSAGES
OBSCF_ISLAMIC_INSTRUMENTS

3.3 Data Source Creation in WebLogic

Database and application setup for OBSCF services has to be performed prior to deployment setup. The data sources for the respective micro-services must be created first before the application deployment. Each of the data source target to their corresponding servers on which the application will be deployed. The following sections explain the list of data sources required to be created for OBSCF services and the steps to configure them in the server.
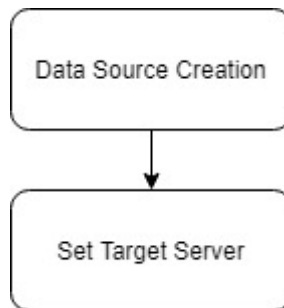
3.4 Data sources List

The table below lists the data sources to be created on each managed server prior to deployment of applications onto managed servers.

Database Connection Pool size to be defined - OBSCF services pool configuration should be consistent with plato services.

Application	Data Source Name	Mapped Database Schema	Data source JNDI
obscfcm-account-maintenance	OBSCFCM_ ACCOUNTING	OBSCFCM_ACCOUNT ING	jdbc/OBSCFCM_ ACCOUNTING
obscfcm-alerts-services	OBSCFCM_ ALERTS	OBSCFCM_ALERTS	jdbc/OBSCFCM_ ALERTS
obscfcm-eod-batch	PLATO_BATCH	PLATO_BATCH	jdbc/EODBATCH
obscfcm-eod-batch	OBSCF_BATCH	OBSCF_BATCH	jdbc/EOD
obscfcm-eod-batch	PLATO_BATCH	PLATO_BATCH	jdbc/PLATOBATCH
obscfcm-auto-recon-batch	PLATO_BATCH	PLATO_BATCH	jdbc/AUTORECON BATCH
obscfcm-auto-recon-batch	PLATO_BATCH	PLATO_BATCH	jdbc/PLATOBATCH
obscfcm-auto-recon-batch	AUTORECONBATC H	OBSCFCM_RECON	jdbc/AUTORECON BATCH

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Application	Data Source Name	Mapped Database Schema	Data source JNDI
obscfcm-charges-services	OBSCFCM_CHARGES	OBSCFCM_CHARGES	jdbc/OBSCFCM_CHARGES
obscfcm-core-services	OBSCFCM_CORE_SERVICES	OBSCFCM_CORE_SERVICES	jdbc/OBSCFCM_CORE_SERVICES
obscfcm-filter-services	OBSCFCM_FILTER	OBSCFCM_FILTER	jdbc/OBSCFCM_FILTER
obscfcm-instruments-receivables-services	OBSCFCM_INSTRUMENTS	OBSCFCM_INSTRUMENTS	jdbc/OBSCFCM_INSTRUMENTS
obscfcm-manual-recon-services	OBSCFCM_RECON	OBSCFCM_RECON	jdbc/OBSCFCM_RECON
obscfcm-report-services	OBSCFCM_REPORT	OBSCFCM_REPORT	jdbc/OBSCFCM_REPORT
obscfcm-workflow-management--services	OBSCFCM_WORKFLOWS_CONDUCTOR	OBSCFCM_WORKFLOWS_CONDUCTOR	jdbc/OBSCFCM_WORKFLOWS_CONDUCTOR
obscfcm-mastermaintenance-services	OBSCFCM_MAINTENANCE	OBSCFCM_MAINTENANCE	jdbc/OBSCFCM_MAINTENANCE
obscfcm-batch-jobs	OBSCFCM-BATCH-JOBS	OBSCFCM-BATCH-JOBS	jdbc/OBSCFCM-BATCH-JOBS
obscf-core-services	OBSCF_CORE	OBSCF_CORE	jdbc/OBSCF_CORE
obscf-finance-services	OBSCF_FINANCE	OBSCF_FINANCE	jdbc/OBSCF_FINANCE
obscf-limits-services	OBSCF_LIMIT_UTILIZ	OBSCF_LIMIT_UTILIZ	jdbc/OBSCF_LIMIT
obscf-report-services	OBSCF_REPORT	OBSCF_REPORT	jdbc/OBSCF_REPORT
obscf-islamic-instruments-services	OBSCF-ISLAMIC-INSTRUMENTS	OBSCF-ISLAMIC-INSTRUMENTS	jdbc/OBSCF-ISLAMIC-INSTRUMENTS
obscf-fci-messaging-service	OBSCF_FCI_MESSAGES	OBSCF_FCI_MESSAGES	jdbc/OBSCF_FCI_MESSAGES
plato-password-policy-service	PLATO_PASSWORD	PLATO_PASSWORD	jdbc/PLATO_PASSWORD
To be mapped with all managed servers	PLATO	PLATO	jdbc/PLATO
	PLATO_UI_CONFIG	PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG
	SMS	SMSCD0	jdbc/sms
	CMNCORE	COMMON_CORE	jdbc/CMNCORE

Note: For creating data source, refer to the **Create Data source** *section in* **Configuration and Deployment Guide***.*

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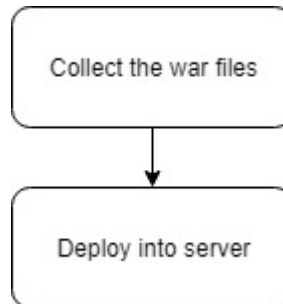# 4. Deployments

4.1 Pre-requisite

The database setup and data sources creation must be performed prior to the application deployment stage. Each of the services corresponds to a specific war file that needs to be deployed into the server. The following sections explain the list of war files of the OBSCF service and the steps to deploy them into the server.

- Environment variables need to be set. Refer to **Configuration and Deployment Guide**.

- For any issues with fly configuration setup, refer to **High Availability Setup Guide**.

- For OBSCF environment variables setup, refer to **OBSCF - Environment Variable Setup Guide Section 2.3**.

- If 'obscf-eod-batch' is already deployed, bring it down and deploy 'obscfcm-eod-batch' provided in the deployment list below.

- If the application is being deployed as standalone OBSCF, then execute below (JobList.txt) script in OBSCF_BATCH schema to ensure common core events are triggered from OBSCFCM EOD:

JobList.txt

4.2 Deployments List

Below table give details of the deployments required on each Server for the Plato application to run. Deploy one after other in the same given order.

Note: INFRA Pre-requisites should be available before proceeding with the Application deployment process.

Application Start-up and Deployment Sequence for new installation or Upgrades.

- PLATO Domain (All Plato Infrastructure Services & Plato Services should be deployed as per respective installation document)

- Common Core (All SMS, Common Core and Mid-Office Common Core services should be deployed as per respective installation document)

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- Domain services
  - All OBSCF and OBSCFCM services in any order except for the below mentioned services which are to be deployed at the end in the order stated in the below list.
    - i. obscfcm-master-maintenance
    - ii. obscfcm-day0-service
    - iii. obscf-day0-service
- Below is the recommended list of managed server names and the application distribution on the targets. But not mandatory, provided the managed server is configured as per the sizing recommendations during the implementation phase.

Note: For the exact version and release numbers, refer to the OSDC file available as a part of the release.

Application	Archive name	OSDC path	Targets
obscf-core-services	obscf-core-services-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-core-services-{version}\ARCHIVE	obscf_ms_2
obscf-finance-services	obscf-finance-services-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-finance-services -{version}\ARCHIVE	obscf_ms_1
obscf-limits-services	obscf-limits-services-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-limits-services -{version}\ARCHIVE	obscf_ms_1
obscf-report-services	obscf-report-services-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-report-services -{version}\ARCHIVE	obscf_ms_1
obscf-day0-service	obscf-day0-service-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-day0-service-{version}\ARCHIVE	OBSCFDAY0
obscf-fci-messaging-service	obscf-fci-messaging-service-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-fci-messaging-service-{version}.war \ARCHIVE	obscf_ms_1
obscf-islamic-instruments-services	obscf-islamic-instruments-services-{version}.war	OBSCF_OSDC_{release}\OBSCF_SERVICES\obscf-islamic-instruments-services-{version}.war \ARCHIVE	obscf_ms_1
obscfcm-account-maintenance-services	obscfcm-account-maintenance-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-account-maintenance-services-{version}\ARCHIVE	obscfcm_ms_1
obscfcm-alerts-services	obscfcm-alerts-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-alerts-services-{version}\ARCHIVE	obscfcm_ms_1
obscfcm-batch-jobs	obscfcm-batch-jobs-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-batch-jobs-{version}\ARCHIVE	obscfcm_ms_1
obscfcm-chatbot-services	obscfcm-chatbot-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-chatbot-services-{version}\ARCHIVE	obscfcm_ms_1
obscfcm-eod-batch	obscfcm-eod-batch-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-eod-batch-{version}\ARCHIVE	obscfcm_ms_1

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obscfcm-auto-recon-batch	obscfcm-auto-recon-batch-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfauto-recon-batch-{version}\ARCHIVE	obscfcm_ms_2
obscfcm-charges-services	obscfcm-charges-services-{version}.war	OBSCF_OSDC_{release}OBCM_SERVICE\obscfcm -charges-services-{version}\ARCHIVE	obscfcm_ms_2
obscfcm-core-services	obscfcm-coreservices-{version}.war	OBSCF_OSDC_{release}OBCM_SERVICE\obscfcm -core-services-{version}\ARCHIVE	obscfcm_ms_2
obscfcm-filter-services	obscfcm-filter-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-filter-services-{version}\ARCHIVE	obscfcm_ms_2
obscfcm-instruments-receivables-services	obscfcm-instruments-receivables-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-instruments-receivables-services-{version}\ARCHIVE	obscfcm_ms_2
obscfcm-manual-reconservices	obscfcm-manual-recon-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-manual-recon-services-{version}\ARCHIVE	obscfcm_ms_3
obscfcm-report-services	obscfcm-report-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-report-services-{version}\ARCHIVE	obscfcm_ms_3
obscfcm-workflowmanagement--services	obscfcm-workflowmanagementservices-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-workflow-management-services7.2.0\ARCHIVE	obscfcm_ms_3
obscfcm-master-maintenance-services	obscfcm-master-maintenance-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-master-maintenance-services-{version}\ARCHIVE	obscfcm_ms_3
obscfcm-workflow-management-services	obscfcm-workflow-management-services-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-workflow-management-services-{version}\ARCHIVE	obscfcm_ms_3
obscfcm-day0-service	obscfcm-day0-service-{version}.war	OBSCF_OSDC_{release}\OBCM_SERVICES\obscfcm-day0-service-{version}\ARCHIVE	obscfcm_DAY0

4.3 <u>Steps to Deploy as Application</u>

To deploy application, refer to **Deploy Application** section in **Configuration and Deployment Guide**.

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5. Conductor Process Installation

This section helps you to install the OBSCF Conductor based process on designated environment. It is assumed that all the prior setup is already done related to Netflix Conductor.

5.1 OBSCF Processes

In conductor, workflows are defined using a JSON based DSL and includes a set of tasks that are executed as part of the workflows. The tasks are either system tasks or simple tasks (aka worker tasks). These simple/worker tasks are implemented by application(s) and run in a separate environment from Conductor. These tasks talk to Conductor server via REST client.

In OBSCF, for every workflow, a workflow definition JSON will be maintained.

Deploy the following list of conductor processes for OBSCF. The deployable units are available in the **obscfcm-workflow-management-services** folder in the OSDC.

JSON File location: OBSCF_OSDC_{release} \OBSCF_SERVICES\ obscfcm-workflow-management-services- {version}.war\WEB-INF\classes\dsl\

Note: For the exact version and release numbers, refer to the OSDC file available as a part of the release.

S. No	Process Name	JSON name
1	REFUND	Refund.json
2	MANUALRECON	RECON.json
3	OBSCFCM_EOD	ObscfEod.json
4	NETTING	Netting.json
5	MGR	MarginRefund.json
6	INSTRUMENT	InstrumentWorkflow.json
7	INSTRUMENT_AUTODEBIT	InstrumentAutoDebitWorkflow.json
8	FINANCE_AUTODEBIT	FinanceAutoDebitWorkflow.json
9	FINANCE	Finance.json
10	FCIMSG	FciMsg.json
11	DISCOUNTING	Discounting.json

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5.2 Steps to Deploy Conductor Process

Pre-Requisite: **PLATO-O** and **PLATO-ORCH-SERVICE** services should be up and registered in the Eureka registry. Refer to **Oracle Banking Microservices Platform Foundation Installation Guide** for the installation of PLATO-O and PLATO-ORCH-SERVICE.

Note: The steps for deploying are the same for all the above workflow process.

Note: The host name and port number of the PLATO-ORCH-SERVICE from the eureka registry should be used in this endpoint.

Perform the following steps to see how to deploy all the workflow process mentioned in the above table using app-shell:

1. Specify **User Name** and **Password**, and login to **Home** screen.

2. On **Home** screen, under **Tasks** menu, click **Business Process Maintenance**.
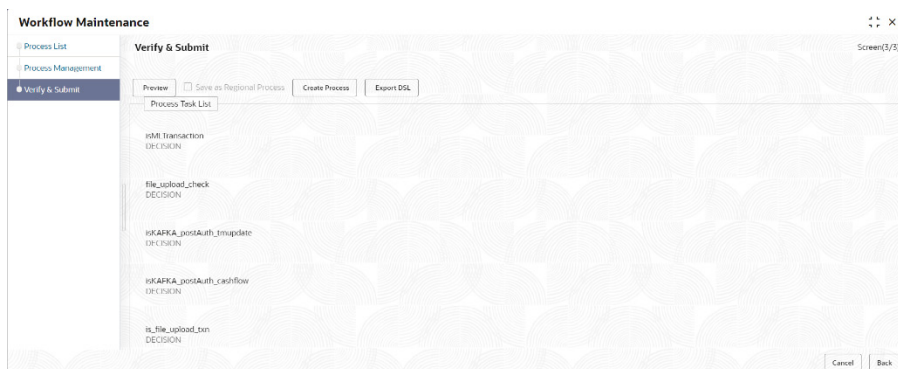   The **Process List** screen displays.

3. Select the **Process Name: blank** checkbox.
4. Click **Upload DSL+** button to upload the JSON file from the path mentioned in the above table.
5. Click **Next** button.
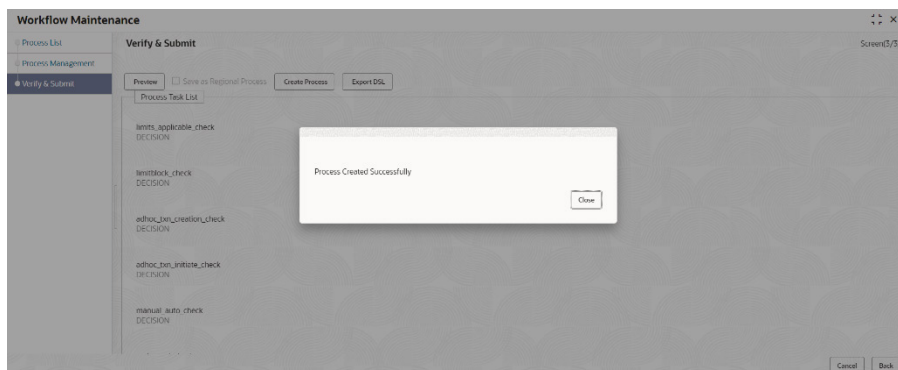   The **Process Management** screen displays.

6. Click **Next** button.

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The **Verify & Submit** screen displays.

7. Click **Create Process** to deploy the workflow process definition.
    The **Process Created Successfully** popup menu displays.

8. If an existing process is modified, a new process with updated version would appear on the process list screen or else a new process would appear
9. Click **Cancel** to exit from the **Business Process Maintenance** menu.
10. To verify if the workflow is registered properly, verify the **Version** number in the **Process List** screen against the version number in the **META_WORKFLOW_DEF** table of the **OBSCFCM_WORKFLOWS_CONDUCTOR** database schema.

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6. Restarts and Refresh

Once everything is deployed, the managed servers. And for each application call path "/refresh" for refreshing the configuration properties.

6.1 Restarting Servers

To restart the server please refer to **Restart Server** section in **Configuration and Deployment Guide**.

6.2 Restart Order

- Sequence in case of any configuration changes in the plato schema's -> properties table or server arguments (eg : port or host)
    - Restart the plato-config-service and plato-discovery-service.
    - Restart the impacted service
- Sequence in case of any configuration changes in the plato-ui-config schema (eg : port or host)
    - Restart plato-ui-config-service

6.3 Caching Impact

Following services use caching and if direct changes are done in database, then service needs to be bounced else cache eviction will happen in 2 hours or configured value in the server start up params:

1. Obscfcm-master-maintenance
2. Obscfcm-filter-service
3. Obscfcm-manual-recon-service
4. Obscfcm-core-service

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7. Logging Area

7.1 Introduction

This section provides information on the logs area after deployment of Plato Applications in WebLogic server.

7.2 Logging Area

Plato Application writes logs in the below area of the server:

`<WEBLOGIC_DOMAIN_CONFIG_AREA>/ logs/plato-api-gateway.log`

Let's assume a domain has been created **scf_domain** in the following area of the server:

`/scratch/oracle/middleware/user_projects/domains/platoinfra_domain`

Logging area for Plato would be

`/scratch/oracle/middleware/user_projects/domains/scf_domain/logs`

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