

# Process Flow Services Installation Guide

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## 1.1 Introduction

This guide would help you to configure the post installation steps of SOA component, installation of Process flow services on designated environment. It is assumed that all the prior setup is already done related with WebLogic 12c installation; WebLogic managed server creation, RCU creation for BPM Suite, BPM Suite installation and Oracle DB installation. It is recommended to use dedicated managed server for each of the Plato infrastructure 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>.

## 1.4 Organization

This installation user guide would allow you to install following services in same order:

- CMC-MAILNOTIFICATION-SERVICES Service
- CMC-PROCESSCODE-SERVICE Service
- CMC-PRIORITY-SERVICE Service
- CMC-QUEUE-SERVICE Service
- CMC-WORKFLOW-TASK-SCHEDULER-SERVICE Service
- CMC-WORKFLOW-TASK-SERVICES Service
- CMC-WORKFLOW-TASK-SMS-SERVICES Service
- CMC-SMS-AUTHENTICATOR-SERVICE Service
- CMC-SMS-JSPROVIDER-SERVICE Service

## 1.5 Related Documents

- Common Core Services Installation Guide
- Day-0 Setup Guide
- LDAP Setup Guide
- Oracle Banking Corporate Lending Process Management Annexure
- Oracle Banking Corporate Lending Process Management BPMN Process Installation Guide
- Oracle Banking Corporate Lending Process Management Pre-Installation Guide
- Oracle Banking Corporate Lending Process Management Services Installation Guide
- Oracle Banking Corporate Lending Process Management User Interface Installation Guide
- Plato Infrastructure Services Installation Guide
- Process Maintenance and Worklist Guide
- Security Management System Services Installation Guide
- SSL Setup Guide

## 2. Database Setup

### 2.1 Introduction

In this section you are going to setup database related configuration for Common Core Installation.

### 2.2 Pre-requisite

Below setup is dependent on Common Core Schema, Midoffice core schema and SMS schema. So, before you proceed with below setup ensure Common Core Schema and SMS Schema is provided to you.

### 2.3 Database Setup

To setup DB for Common Core below step need to be followed:

DDL's:

Collect DDL's mentioned in the **From-Path** section of the below table and compile into respective schema.

Service Name	From-Path	Compile To
CMC-WORKFLOW-TASK-SERVICES	MidofficeCommon\Database\DDL	Mid-office Common Core Schema

INC's:

Collect INC's mentioned in the **From-Path** section of the below table and compile into respective schema.

Service Name	From-Path	Compile To
CMC-WORKFLOW-TASK-SERVICES	MidofficeCommon\Database\INC	Mid-office Common Core Schema
	MidofficeCommon\Database\SEQUENCE	Mid-office Common Core Schema
	MidofficeCommon\Database\SMS	SMS Schema

SEQs:

Collect SEQ's mentioned in the **From-Path** section of the below table and compile into respective schema.

cmc-workflow-task-services	MidofficeCommon\Database\SEQUENCE	Mid-office Common core
----------------------------	-----------------------------------	------------------------

## 3. SOA Post Installation Configuration

### 3.1 Introduction

In this section, you are going to setup SOA related configuration for Workflow services Installation.

### 3.2 Pre-requisite

- Oracle Fusion Middleware 12cR2 12.2.1.3 has to be installed on the machine.
- Oracle BPMN Suite 12.2.1.3 has to be installed on the machine

### 3.3 Authentication Configuration

Download the Authenticator jar ([cmc-sms-authenticator-service-1.0.jar](#) , cmc-sms-jpsprovider-service-1.0.jar) from the OSDC Pack.

Application	Archive name	OSDC Path	OSDC Path
cmc-sms-authenticator-service	cmc-sms-authenticator-service-1.0.0.jar	MidofficeCommon\App\cmc-sms-authenticator-service	SOA Server
cmc-sms-jpsprovider-service	cmc-sms-jpsprovider-service-1.0.0.jar	MidofficeCommon\App\cmc-sms-jpsprovider-service	SOA Server

Apply the Authenticator in the below path

1. In cmc-sms-authenticator-service-1.0.0.jar, replace the corresponding SMS, Branch service url's in CISProperties.properties file

```
JNDI.Name=jdbc/fcjdevDS
```

```
GETROLES=http://10.184.153.185:7001/sms-core-service
```

```
GETUSERS=http://10.184.153.185:7001/sms-core-service
```

```
appld=sms
```

```
userId=<<WFUSER>>
```

```
source=EXTSYS
```

```
branch=<<BRANCH_CODE>>
```

```
GETBRANCHES=http://ofss220245:7001/cmc-branch-services/
```

```
appldBranch=<<CMNCORE>>
```

```
BPELCREDENTIAL=SHA-
```

```
512!1!311480CAAE1DE602B038E6A4A8DDADC65145526088525540338880D12A09480A97D  
EB0C7B4FAB06BBC3148D9090187260EF4F3F88EDF0E17E1FA596C3B1837D
```

```
BPELSALT=0A1FB843E1626F8C6B14286DC4C17030
```

2. Copy the cmc-sms-authenticator-service.jar file to  
    <ORACLE\_HOME>\wlserver\server\lib\mbeantypes

3. Restart the Admin Server.

Note: Identify a user account and replace the valid user with <<WFUSER>> and ensure that user

account has the sms - role configuration as mentioned below

CMC_FA_CURRENCY_DEFN_VIEW
CMC_FA_CURRENCY_HOLIDAY_VIEW
CMC_FA_CUSTOMER_CATEGORY_VIEW
CMC_FA_EXT_CUSTOMER_VIEW
CMC_FA_EXT_BRANCH_PARAMETERS_VIEW
CMC_FA_EXT_BANK_PARAMETERS_VIEW

CMC_FA_LOCAL_HOLIDAY_VIEW
CMC_FA_SYSTEM_DATES_VIEW
CMC_FA_WF_VIEW
TFPM_FA_CMC_QUEUE_MA_VIEW
TFPM_FA_CMC_PRCODE_MA_VIEW

<<BRANCH\_CODE>> - Home branch of the user <<WFUSER>>  
 Update the IP address of the service for the GETROLES, GETUSERS and GETBRANCHES.  
 <<CMNCORE>> App id of the common core services

### 3.4 SOA - View Compilation

1. Before compiling the CPVW\_BPMN\_USERS and CPVW\_BPMN\_USERROLES views, Create the DBlink in the CORE schema using the below script (Use the same dblink name).

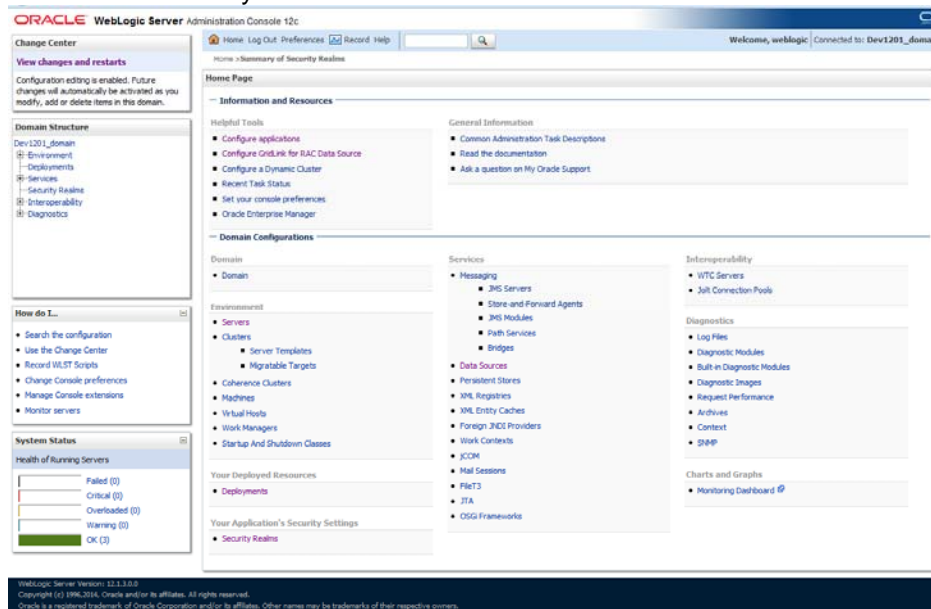
**CREATE DATABASE LINK SMSDEMOLINK CONNECT TO <<SMS schema Username>> IDENTIFIED BY <<SMS schema Password>> USING '<<SID>>';**

2. CPVW\_BPMN\_USERS and CPVW\_BPMN\_USERROLES views are available in the cmc-workflow-task-sms-services-1.0.0.war.
3. Open the cmc-workflow-task-sms-services-1.0.0.war, navigate to the \WEB-INF\classes\db\migration\application\ path and compile all the views.

### 3.5 Realm configurations

Follow the below steps for the Realm configurations.

1. Login to the Console of SOA server
2. Click on Security Realms.



3. Click on myrealm.

ORACLE WebLogic Server Administration Console 12c

Welcome, weblogic | Connected to: Dev1201\_domain

Home > Summary of Security Realms

### Summary of Security Realms

A security realm is a container for the mechanisms—including users, groups, security roles, security policies, and security providers—that are used to protect WebLogic resources. You can have multiple security realms in a WebLogic Server domain, but only one can be set as the default (active) realm.

This Security Realms page lists each security realm that has been configured in this WebLogic Server domain. Click the name of the realm to explore and configure that realm.

[Customize this table](#)

Realms (Filtered - More Columns Exist)

Name ↕	Default Realm
myrealm	true

Showing 1 to 1 of 1 Previous | Next

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- Click on Providers tab and click on "New" button to create new authentication provider (FCJCustomProvider). Provider name as CMCAuthenticator and type as FCUBSUserAuthenticator.

ORACLE WebLogic Server Administration Console 12c

Welcome, weblogic | Connected to: Dev1201\_domain

Home > Summary of Security Realms > myrealm > Providers > FCJCustomProvider > Providers

### Create a New Authentication Provider

OK | Cancel

**Create a new Authentication Provider**

The following properties will be used to identify your new Authentication Provider.

\* Indicates required fields

The name of the authentication provider.

\* Name:

This is the type of authentication provider you wish to create.

Type:

OK | Cancel

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- Click Reorder to bring provider to first of all providers and click OK.



**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help Welcome, weblogic Connected to: Dev1201\_domain

Home > Summary of Security Realms > myrealm > Providers > FCJCustomProvider > Providers

Messages

Create operation cancelled - no Authentication Providers created.

Settings for myrealm

Configuration Users and Groups Roles and Policies Credential Mappings **Providers** Migration

Authentication Password Validation Authorization Adjudication Role Mapping Auditing Credential Mapping Certification Path Keystores

An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS. You can also configure a Realm Adapter Authentication provider that allows you to work with users and groups from previous releases of WebLogic Server.

Customize this table

**Authentication Providers**

New Delete **Reorder** Showing 1 to 4 of 4 Previous | Next

Name	Description	Version
<input type="checkbox"/> FCJCustomProvider	Authentication provider for FLEXCUBE users	FCUBS 12.1
<input type="checkbox"/> Trust Service Identity Asserter	Trust Service Identity Assertion Provider	1.0
<input type="checkbox"/> DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/> DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0

New Delete Reorder Showing 1 to 4 of 4 Previous | Next

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**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help Welcome, weblogic Connected to: Dev1201\_domain

Home > Summary of Security Realms > myrealm > Providers > FCJCustomProvider > Providers

**Reorder Authentication Providers**

OK Cancel

**Reorder Authentication Providers**

You can reorder your Authentication Providers using the list below. By reordering Authentication Providers, you can alter the authentication sequence.

Select authenticator(s) in the list and use arrows to move them up and down in the list.

**Authentication Providers:**

Available:

- FCJCustomProvider
- Trust Service Identity Asserter
- DefaultAuthenticator
- DefaultIdentityAsserter

OK Cancel

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6. Click on CMCAAuthenticator.
7. In Common tab change the control flag to "SUFFICIENT".

8. Restart the Server.

## 3.6 Jar Configuration

Follow the below steps to configure the libovd details for SOA components

1. From the setup artifact copy the "cmc-sms-jpsprovider-service-1.0.0.jar" file into the OSDC Pack.
2. Create a folder by name 'classes' at the location '`<MIDDLEWARE_HOME>\soa\soa\modules\oracle.soa.ext_11.1.x'`.
3. Extract the file 'cmc-sms-jpsprovider-service-1.0.jar' and copy the folder and sub folders of "oracle" from classes and move to: '`<MIDDLEWARE_HOME>\soa\soa\modules\oracle.soa.ext_11.1.x\classes'`.
4. Navigate to the location '`<MIDDLEWARE_HOME>\soa\soa\modules\oracle.soa.ext_11.1.x\classes'`. Edit the properties file 'CISProperties.properties' and update '[JNDI.name](#)' with the JNDI name defined. Replace the corresponding SMS, Workflow TaskSMS and Workflow Scheduler url's in CISProperties.properties file in Oracle/Middleware/Oracle\_Home/soa/soa/modules/oracle.soa.ext\_11.1.1/classes/oracle/fsgbu/sms/provider/cac folder.
5. Replace the corresponding SMS, Workflow TaskSMS and Workflow Scheduler url's in CISProperties.properties file in cmc-sms-jpsprovider-service-1.0.0.jar
6. Copy "cmc-sms-jpsprovider-service-1.0.jar" to '`<MIDDLEWARE_HOME>/user_projects/domains/<domain_name>/config/fmwconfig/ovd/plugins/lib`.
7. in case the above folder is not available Create the directory structure as mentioned.
8. Copy the "cmc\_sms\_adapter.xml" to '`<MIDDLEWARE_HOME>/oracle_common/modules/oracle.ovd/templates/`



cmc\_sms\_adapter.xml

- Search for **<CMCDATASOURCE>** in `cmc_sms_adapter.xml` and update it with [jdbc/fcjdevDS](#) Datasource name.
- Execute “libovdadapterconfig” script which is present in ‘<MIDDLEWARE\_HOME>/oracle\_common/bin’ with below parameters. Update the admin server host name or ip ,admin server port ,weblogic user id, domain home and fcubs datasource

**libovdadapterconfig.sh -adapterName cmcAdapter -adapterTemplate fcubs\_adapter.xml -host <ADMIN\_SERVER\_HOST> -port <ADMIN\_PORT> -userName <WEBLOGIC\_USERID> -domainPath <DOMAIN\_HOME> -dataStore DB -root ou=cmc,dc=oracle,dc=com -contextName default -dataSourceJNDIName <CMCDATASOURCE>**

1. Check whether appid mapped and SOA dependent ("[jdbc/fcjdevDS](#)") JNDI's are created.
2. Make sure that the above JNDI's are not enabled with Supports Global Transactions.
3. Restart the server post configuration changes
4. Do the below changes and Deploy the `cmc-workflow-task-service-1.0.0.war` in the server.
5. Open the `cmc-workflow-task-service-1.0.0.war`, navigate to the `\WEB-INF\classes\` and do the required changes in the `application.properties`.  

```
providerUrl=t3://<<host name>>:<<SOA server-PORT>>/soa-infra
wllnitalContextFactory=weblogic.jndi.WLInitialContextFactory
security_principal=<<USERNAME>>
security_credentials=<<PASSWORD>>
dedicationConnection=true
appld_maint=CMNCORE
header_branch=004
header_source=EXTSYS
appld_sms=sms
```

Note:

Check the users & groups are populated properly in realm. Make sure that SYSTEM user is created and populated in the realm.

(If user and roles are not properly populated, check the views (CPVW\_BPEL\_USERS) are properly configured in Core DB).

SYSTEM, WORKFLOWSYSTEM users are mandatory, should be maintained be available the CMC\_TM\_BPMN\_USERS table (available Core DB).

---

## 4. Domain and Cluster Configuration

### 4.1 Common Core Domain Configuration

#### 4.1.1 Prerequisites

- Machine should have Java JDK1.8.0\_171 has installed.
- Oracle Fusion Middleware 12cR2 12.2.1.3 has to be installed on the machine.

#### 4.1.2 Steps to Create Domain

It is recommended to have different managed server in one domain for each application. For Creating Domain and Configuration please refer to ANNEXURE “**How to create and Cluster Configuration**”.

---

## 5. Data Sources Creation

### 5.1 Prerequisite

Database and application setup for PLATO must be performed prior to deployment setup.

### 5.2 Data Sources List

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

Data Source Name	Data source JNDI	Targets
CMNCORE	jdbc/CMNCORE	Mid office Common Core Server

Steps to create data source in WebLogic is same for all the above except for the connection details and names. Check the below screenshots to understand data source creation.

### 5.3 Creating Data Source

For creating data source in please refer ANNEXURE “**How to create Data sources section**”.

---

## 6. Deployments

### 6.1 Pre-requisite

Before you proceed with below, please make sure previous steps are completed.

### 6.2 Deployments List

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

Application	Archive name	OSDC Path	Targets
cmc-account-services	cmc-account-services-1.0.0.war	CommonCore\cmc-account-services\App	Common Core Server
cmc-mailnotification-services	cmc-mailnotification-services-1.0.0.war	MidofficeCommon\App\cmc-mailnotification-services	Mid office Common core server
cmc-priority-service	cmc-priority-service-1.0.0	MidofficeCommon\App\cmc-priority-service	Mid office Common core server
cmc-processcode-service	cmc-processcode-service-1.0.0.war	MidofficeCommon\App\cmc-processcode-service	Mid office Common core server
cmc-queue-service	cmc-queue-service-1.0.0.war	MidofficeCommon\App\cmc-queue-service	Mid office Common core server
cmc-workflow-task-scheduler-service	cmc-workflow-task-scheduler-service-1.0.0.war	MidofficeCommon\App\cmc-workflow-task-scheduler-service	Mid office Common core server
cmc-workflow-task-service	cmc-workflow-task-service-1.0.0.war	MidofficeCommon\App\cmc-workflow-task-services	Mid office Common core server

### 6.3 Steps to Deploy as Application

To deploy application please refer ANNEXURE. “How to deploy section”.

---

## 7. Restarts and Refresh

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

### 7.1 Restarting Servers

To restart the server please refer to ANNEXURE.”**How to restart**” section.

---

## 8. Logging Area

### 8.1 Introduction

This part of the document will talk about the logs area where after deployment of Common Core Applications in WebLogic server.

#### 8.1.1 Logging Area

Mid office Common Core Application writes logs in the below area of the server-  
<WEBLOGIC\_DOMAIN\_CONFIG\_AREA>/servers/MIDCOREAPP/logs/MIDCOREAPP.out  
Let's assume a domain has been created **MidCore\_domain** with **managed\_server** name called **MIDCOREAPP** in the following area of the server

/scratch/oracle/middleware/user\_projects/domains/**MidCore\_domain**. Logging area for Common core would be **/scratch/oracle/middleware/user\_projects/domains/MidCore\_domain/servers/MIDCOREAPP/logs/MIDCOREAPP.out**.