Subscription Workflow Installation Manual
Oracle FLEXCUBE Investor Servicing
Release 14.7.4.0.0
Part No. F94456-01
[March] [2024]

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1. Preface

1.1 Introduction

This guide helps you to install the Oracle FLEXCUBE Investor Servicing Subscription Workflow. 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 FLEXCUBE Investor Servicing Subscription Workflow services.

1.2 Audience

This document is intended for WebLogic admin or ops-web team who are responsible for installing the banking products of Oracle Financial Services Software Limited.

1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/us/corporate/accessibility/index.html

2. FCIS Subscription Workflow Installer - Setup

2.1 Installation Steps

- Identify person/team for respective product installation
- Identify machines required for installation
- Identify the database, Create required database schemas, (Ex: PLATO, PLATOUI, PLATOSEC, PLATOFEED, CMNCORE, SMS, PLATOBATCH, PLATOORCH, PLATOALERTS, REPORTSERVICE)
- Download Shipment
- Unzip Shipment
- Verify the software versions in the software directory. If the required version is not available in the software directory, download and copy same here.
- Copy application deployable (i.e., war files) to respective product directories under deployable/app directory
- Verify the chef version in respective VM, and if required update with the latest version as mentioned in the installation guide below
- Install OBMA Foundation - refer Installing OBMA Related Products
- Install OBMA Product (Product installations can be done sequentially) - refer Installing OBMA Related Products
- During Installation Monitor logs, Eureka and Weblogic Console
- In case of errors - rectify error and re-run installer
- Post Installation - Login and check app_shell.

Person using this installer should have basic knowledge of

- Linux
- Database
- Weblogic
- Chef tool

Operating System – Linux

2.1.1 Step 1: Pre-requisites

- Set bash shell and configure the proxy.
- Make sure yum is updated on the machine, for do that run the command 'yum update yum'
- check the system date & time as a valid and latest.
- FCIS system and REST service should be ready in and running state. FCIS schema's default password will be "welcome1".
- In order to set the FCIS schema custom password refer Section 6: Databag

Software	Version	Description / filename
JAVA	Refer FCIS Release Notes	Download from Oracle
Database	Refer FCIS Release Notes	Download from Oracle
Weblogic	Refer FCIS Release Notes	Download from Oracle

Product WAR Files		Download from Installer
ORC		Download from Installer

2.1.2 Step 2: Database Installation

Database installation is not part of this installer, it is expected that the Oracle 19c database needs to be installed and required schemas needs to be created before installation start.

- Create required database schemas, (Ex: PLATO, PLATOUI, PLATOSEC, PLATOFEED, PLATOBATCH, PLATOORCH ,CMNCORE, SMS, PLATOALERTS, REPORTSERVICE) with TABLE SPACES
- Default password will be “welcome1” for the all above schemas. In order to set the custom password refer Section 6: Databag. The same password will be used for JNDI creations.
- During FCIS installation, If you click ‘Generate Report’ button, in the ‘Logs’ folder, the installer creates an SQL file ‘grantScript.sql’ containing the script for granting the privileges. You can use this file to get the grant access. Provide grant permissions to all the above schemas.

Note: Only system user can execute the file ‘grantScripts.sql’ for granting privileges.

2.1.3 Step 3: Downloading Installer

Perform the below steps to download the installer.

Create Linux OS User (e.g. *obmauser*)

- Launch putty and login to the VM (where installation is planned) with OS user (eg. *obmauser*, wls1114, etc)
- Create a directory *obma_installer* in /scratch

  mkdir -p /scratch/obma_installer

  chmod 755 /scratch/obma_installer

- Download the respective installer from shipment OBMA_INSTALLER folder to *obma_installer* directory

2.1.4 Step 4: Downloading Software

Download software's from Shipment third party software’s to corresponding software folder like below, if not available please download from Oracle like (java, weblogic, etc)

cd /scratch/obma_installer/softwares/java

cd /scratch/obma_installer/softwares/kafka

cd /scratch/obma_installer/softwares/orc-infra

cd /scratch/obma_installer/softwares/wls

cd /scratch/obma_installer/softwares/wls_patch

cd /scratch/obma_installer/softwares/zookeeper

2.1.5 Step 5: Downloading Applications (Domains) Related WAR Files

Before performing installation, copy the WAR file from respective shipment path to respective folders in the below mentioned folder structure

Folder Name	Download Location
/scratch/obma_installer/deployables/apps/**cmc**	Installer → COMMONCORE1
/scratch/obma_installer/deployables/apps/**sms**	Installer → SMS
/scratch/obma_installer/deployables/apps/**moc**	Installer → MIDOFFICE_COMMON_CORE
/scratch/obma_installer/deployables/apps/**app-shell**	Installer → UI
/scratch/obma_installer/deployables/apps/**platoinfra**	Installer → PLATO
/scratch/obma_installer/deployables/apps/**obis**	Installer → FCIS_SERVICES
/scratch/obma_installer/deployables/apps/**conductor**	Installer → CONDUCTOR

Note : Installer will not check the presence of files in the respective directories before installation. User needs to ensure all the required files with correct version are available here.

2.1.6 Step 6: Update Machine details in obma_properties and obis_properties

cd /scratch/obma_installer/chef-repo

*Update **OS user name** manually in same obma_properties.rb*

INSTALL_USER = "<OS_USER>"

INSTALL_GROUP = "<OS_USER_GROUP>"

Update proxy manually in same obma_properties.rb

http_proxy = "http://<PROXY_HOST> "

https_proxy = "https:// <PROXY_HOST> "

Update **machine** details manually in *obma_properties.rb*

ZOOKEEPER_HOST1 = "<HOST_NAME>"

KAFKA_HOST = "<HOST_NAME>"

UBS_HOST = "<HOST_NAME>"

PLATO_CONFIG_SERVICES_URI = “https://<HOST_NAME>"

PLATO_APIGATEWAY_URI = https://<HOST_NAME>

Update **Database** details manually in same *obma_properties.rb*

ORACLE_PDB_SID = "<FCIS_DATABASE_NAME>"

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ORACLE_PDB_HOSTNAME = "<HOST_NAME>"

Update **LDAP** details manually in same *obma_properties.rb*

LDAP_HOST = "<HOST_NAME>"

Update **OBIS_SCHEMA** details manually in same *obma_properties.rb*

OBIS_SCHEMA = "<FCIS_SCHEMA>"

Update following placeholders setUserOverrides_obma.sh.rb manually with document server host ,port with user name and password.

JAVA_OPTIONS="${JAVA_OPTIONS}-Dflyway.domain.placeHolders.dmsServiceUrl= http://<DOCUMENT_SERVER_HOST>:<PORT> /_dav/cs/idcplg"

JAVA_OPTIONS="${JAVA_OPTIONS} -Dflyway.domain.placeHolders.dmsServicePwd=<DOCUMENT_SERVER_WEBLOGIC_PASSWORD>"

JAVA_OPTIONS="${JAVA_OPTIONS} -Dflyway.domain.placeHolders.dmsServiceUsrname=<DOCUMENT_SERVER_WEBLOGIC_USER_NAME>"

2.1.7 Step 7: Verify Run List in */scratch/obma_installer/chef-repo/roles/obma_mw.rb*

run_list
['recipe[obma_sysprep::ulimit]','recipe[obma_java::_install_java]','recipe[obma_java::create_certs]','recipe[obma_zookeeper]','recipe[obma_kafka]','recipe[obma_weblogic::install_wls]','recipe[obma_weblogic::install_wls_patch]','recipe[obma_weblogic::domain]','recipe[obma_weblogic::startadmin]','recipe[obma_weblogic::startnm]','recipe[obma_weblogic::configureembaddedwlsldap]','recipe[obma_weblogic::ssl_admin]','recipe[obma_weblogic::stopadmin]','recipe[obma_weblogic::ssl_nodemanager]','recipe[obma_weblogic::restartadmin]','recipe[obma_weblogic::cluster]','recipe[obma_weblogic::addjdbcconnections_plato]','recipe[obma_weblogic::setuseroverridesupdate_plato]','recipe[obma_weblogic::startman]','recipe[obma_weblogic::deployapp]']

2.1.8 Step 8: Install ORC on machine

1. Launch putty and login with root user

2. Navigate to the chef repo path **cd /scratch/obma_installer/chef-repo**

Example: *[cd /scratch/obma_installer/chef-repo*

3. Verify the version of ORC installed in the VM by executing the command **chef-solo --version**

Example: *[chef-repo]# chef-solo --version*

ORC Infra Client: 16.13.16

4. If the VM has older version of chef or orc, then remove the same by executing the command **yum remove orc-infra-<version_no.>**

*__Example:__ yum remove orc-infra-16.1**

Alternatively, in case of chef solo installation, remove the same by executing the command ***yum remove chef-****

5. Install the new version of ORC available in shipment THIRD_PARTY_SOFTWARE/orc-infra folder, by executing **install_orc.sh** script, and he command for same is **./install_orc.sh**

Example: *[root@machine1 chef-repo]# ./install_orc.sh*

```
Installing ORC INFRA
Preparing...                          ################################# [100%]
Updating / installing...
   1:orc-infra-16.13.16-2.el7         ################################# [100%]
```

Thank you for installing ORC Infra Client!

6. Verify the version as mentioned in Point#3 above

2.1.9 Step 9: Login

Login using root user on Linux machine

sudo su root

2.1.10 Step 10: Run Installer

After logging using root user run installer command

cd /scratch/obma_installer/chef-repo

sh obma_installer.sh

(It will take around 40 mins to complete obma foundation setup)

2.1.11 Step 11: Verify OBMA Installation

Verify OBMA foundation installation completed

cd /scratch/obma_installer/chef-repo

obma_installer.log

Check message is present at end as *'ORC Infra Client finished'*

Verify: All service is running and active state in weblogic

OBMA Foundation Installation is completed.

If any failures, Check the logs, rectify the errors.

2.1.12 Step 12: Verify Run List in */scratch/obma_installer/chef-repo/roles/obma_mw.rb*

run_list
['recipe[obma_sysprep::ulimit]','recipe[obma_java::_install_java]','recipe[obma_java::create_certs]','recipe[obma_zookeeper]','recipe[obma_kafka]','recipe[obma_weblogic::install_wls]','recipe[obma_weblogic::install_wls_patch]','recipe[obma_weblogic::domain]','recipe[obma_weblogic::startadmin]','recipe[obma_weblogic::startnm]','recipe[obma_weblogic::configureembaddedwlsldap]','recipe[obma_weblogic::ssl_admin]','recipe[obma_weblogic::stopadmin]','recipe[obma_weblogic::ssl_nodemanager]','recipe[obma_weblogic::restartadmin]','recipe[obma_weblogic::cluster]','recipe[obma_weblogic::addjdbcconnections_plato]','recipe[obma_weblogic::setuseroverridesupdate_plato]','recipe[obma_weblogic::startman]','recipe[obma_weblogic::deployapp]']

Check which job is failed, remove the successful job and re execute again.

3. Cleanup and Re-installing setup post failed Installation

- Launch admin console of respective setup
- Shutdown all the managed servers
- Post shutdown of all the managed servers, shutdown Admin Sever
- Next launch putty and login to the respective setup with local user (i.e.ofssobp)
- Here kill Node Manager and also other applications like kafka, zookeeper etc, if the same have been installed in this VM
- Verify the status of all the servers using below command. There should not be any process of the server's running
    1. **ps -aef | grep AdminServer**
    2. **ps -aef | grep NodeManager**
    3. **ps -aef | grep kafka**
    4. **ps -aef | grep zookeeper**

    Note : The above commands are for reference only.

- Now navigate to scratch directory by executing the command, **cd /scratch**
- List the files and directories by executing the command **ls -lrt**
- Delete the directories ssl, app, extract, obma & work_area by executing the command

    rm -rf ssl app extract obma work_area

    Note: Please execute caution before executing the same. Also, you can rename these directories or move these directories out from scratch directory before re-initiating the fresh installation

- Re-execute the installer as mentioned in the respective installation document

    Login to weblogic console http://<host_name>:7001/console.

    Username : weblogic

    Password : welcome1

    Check all the servers are in RUNNING state.

    Check Datasources are properly mapped with corresponding schemas.

    Check all wars are deployed properly except OBIS wars.

4. Day 0 Scripts

Step 1: Check out PLATO_Day0_Script.sql which is also available in same shipment installer path.

- Edit and replace the Host name.

  Example: Insert into PLATO.PROPERTIES (ID,APPLICATION,PROFILE,LABEL,KEY,VALUE) values (PROPERTIES_ID_SEQ.NEXTVAL,'obis-process-driver-services','jdbc','jdbc','spring.cloud.stream.kafka.binder.brokers','<HOST_NAME>:9092');

  After replacing the above column, Run this SQL script in PLATO Schema.

Step 2: Check out PLATOUI_Day0_Script.sql which is also available in same shipment installer path.

- Edit and replace the 'url' column with the Host name.

  Example: UPDATE platoui.product_services_env_ledger set url = 'https://<HOST_NAME>:8082';Replace the 'jdbc','flyway.domain.schemas ' ;

  After replacing the above property, Run this SQL script in PLATOUI Schema.

Step 3: Check out ERTB_MSGS_Day0_Script.sql which is also available in same shipment installer path.

- Run this SQL script in FCIS Schema.

Note : Please make sure Release Configuration should not be enabled in WebLogic.

Step 4:

Execute the obis_installer

cd /scratch/obma_installer/chef-repo

sh obis_installer.sh

(It will take around 20 mins to complete obis setup)

Step 5: Verify OBIS installation completed

cd /scratch/obma_installer/chef-repo

obis_installer.log

Step 6: cd /scratch/obma_installer/deployables/apps/platoinfra

Set java home path ***export JAVA_HOME=<java_path>***

$JAVA_HOME/bin/keytool -import -alias <CERTIFICATE_ALIAS_NAME> -keystore $JAVA_HOME/lib/security/cacerts -file <CERTIFICATE_NAME>

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$JAVA_HOME/bin/keytool -import -v trustcacerts -alias <CERTIFICATE_ALIAS_NAME> -keystore <KEYSTORE_FILE> -file <CERTIFICATE_FILE> -keypass <keypass> -storepass <STOREPASS>

nohup java -jar plato-apigateway-router-9.1.0.jar --plato.services.config.uri=https://<HOSTNAME>:<UICONFIG_SERVICE_PORT_NO> --plato.service.logging.path=<LOG_PATH> --server.ssl.enabled=true --server.ssl.key-store=<KEYSTORE_FILE> --key-store-password=<ENCRYPTED_KEY_STORE_PASSWORD> --server.ssl.trust-store=<TRUST_STORE_FILE> --trust-store-password=<ENCRYPTED_TRUST_STORE_PASSWORD> --salt=<ENCRYPTED_SALT>

Note: Use the encryption utility provided at Section 5: Encryption Logic

5. Encryption Logic

To encrypt secrets use the utility provided at **OBMA_INSTALLER/softwares/security_toolkit**

Encryption of secrets:
To encrypt the passwords as per Oracle Standards, we recommend toolkit - plato-security-toolkit
Usage: java -jar plato-security-toolkit-9.1.0.jar
Enter pass phrase: Test123
Enter Salt: 0.9412345671234567
Encrypted Password: m4Q1rbtegkWse2s7D2jKfw==

Encryption of salt:
To encrypt the salt as per Oracle Standards, we recommend toolkit - plato-security-salt-encryption-toolkit
Usage: java -jar plato-security-salt-encryption-toolkit-9.1.0.jar
Enter Salt: 0.9412345671234567
Encrypted Password:
VmtjMWQxTnJOVlpPV0VaWFZrVndUMWxYTVU1bFJsSlpZMFZLYTFaVVZrWldWbWgzVkRGS1JsWnFVVDA9

6. Data Bag

6.1 Updating passwords in databag

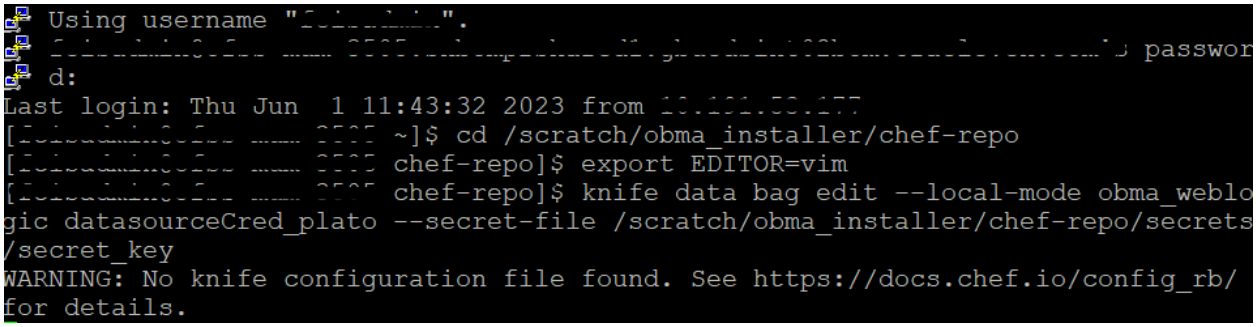
1. Launch putty and login to product VM with NIS user (eg: dkarkera) and then switch to root user
2. Navigate to the “chef-repo” directory by executing the command, **cd /scratch/obma_installer/chef-repo**
3. Set the required editor by executing the command, **export EDITOR=vim**
4. Execute the below command to open the databag file in edit mode, **knife data bag edit --local-mode <databag_sub_directory> <datasource_credential_json_file> --secret-file <secret_key_path>**

Attribute Name	Attribute Description
databag_sub_directory	Name of sub directory where the datasource credential json file is located inside databag directory Eg.: obma_weblogic, obma_java etc
datasource_credential_json_file	Name of the datasource credential json file where all the credential related to respective product is listed Eg.: datasourceCred, datasourceCred_plato *Note: Here mention the filename without the .json extension*
secret_key_path	Location to the secret key Eg.: /scratch/obma_installer_ssl/chef-repo/secrets/secret_key

Example:

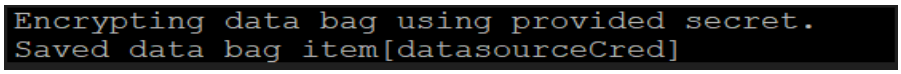
knife data bag edit --local-mode obma_weblogic datasourceCred --secret-file /scratch/obma_installer/chef-repo/secrets/secret_key

knife data bag edit --local-mode obma_weblogic datasourceCred_plato --secret-file /scratch/obma_installer/chef-repo/secrets/secret_key



5. Key attribute “OBIS” password should be same as FCIS schema password.

6. Post update to the credential file, save and close



7. Create User in Weblogic

1. Login to weblogic console http://<ip>:7001/console
2. Go to Home>Security Realms > myrealm > Users and Groups
3. Click New, provide user name MEADMIN1 and provide password in and save.
4. Create MEADMIN2 using step 3
5. Login with MEADMIN1 to the application (https://<HOST_NAME>:8006/app-shell/

8. Annexure

Refer the shipment for the scripts.

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March 2024
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