Oracle® FLEXCUBE Investor Servicing

Subscription Workflow Installation Guide

Release 14.8.0.0.0
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Oracle FLEXCUBE Investor Servicing Subscription Workflow Installation Guide, Release 14.8.0.0.0

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Contents

Preface

Oracle FLEXCUBE Investor Servicing is a comprehensive mutual funds automation software from Oracle® Financial Servicing Software Ltd.©.

You can use the system to achieve optimum automation of all your mutual fund investor servicing processes, as it provides guidelines for specific tasks, descriptions of various features and processes, and general information.

This topic contains the following sub-topics:

Purpose

This manual is designed to help acquaint you with the installation of **Oracle FLEXCUBE Investor Servicing** application.

Audience

This manual is intended for the following User/User Roles:

Table 1 Users and Roles

Users	Roles
Implementation team	Implementation of Oracle FLEXCUBE Investor Servicing
Presales team	Install Oracle FLEXCUBE Investor Servicing for demo purpose
Bank personnel	Who installs Oracle FLEXCUBE Investor Servicing

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes.

Acronyms and Abbreviations

The list of the acronyms and abbreviations used are as follows:

Table 2 Acronyms and Abbreviations

Abbreviation	Description
FCIS	Oracle FLEXCUBE Investor Servicing
OEM	Oracle Enterprise Manager

Table 2 (Cont.) Acronyms and Abbreviations

Abbreviation	Description
EMS	Electronic Messaging Service
EJB	Enterprise Java Bean
MDB	Message Driven Beans

1

FCIS Subscription Workflow Installer - Setup

This topic provides the information about FCIS Subscription Workflow Installer - Setup.

This topic has the following sub-topic:

- Installation Steps
  This topic provides information on Installation Steps.

1.1 Installation Steps

This topic provides information on Installation Steps.

1. Identify person/team for respective product installation.
2. Identify machines required for installation.
3. Identify the database, Create required database schemas.

   Ex: PLATO, PLATOUI, PLATOSEC, PLATOFEED, CMNCORE, SMS, PLATOBATCH, PLATOORCH, PLATOALERTS, REPORTSERVICE, OBPYBPROC, PARTY, PLATOTRANSPORT, PLATORULE.
4. Download Shipment.
5. Unzip Shipment.
6. Verify the software versions in the software directory. If the required version is not available in the software directory, download and copy same here.
7. Copy application deployable (war files) to respective product directories under deployable/app directory.
8. Verify the chef version in respective VM, and if required update with the latest version as mentioned in the installation guide below.
9. Install OBMA Foundation - refer Installing OBMA Related Products.
10. Install OBMA Product (Product installations can be done sequentially) - refer Installing OBMA Related Products.
11. During Installation Monitor logs, Eureka and Weblogic Console.
12. In case of errors - rectify error and re-run installer.
13. Post Installation - Login and check app_shell.

Person using this installer should have basic knowledge of

- Linux
- Database
- Weblogic
- Chef tool

Operating System – Linux.

- Prerequisites
  This topic provides information on prerequisites of installation.
- Database Installation
  This topic provides information on Database Installation.
- Downloading Installer
  This topic provides information on downloading Installer.
- Downloading Software
  This topic provides information on downloading Software.
- Downloading Applications (Domains) Related WAR Files
  This topic provides information on Downloading Applications (Domains) Related WAR Files.
- Update Machine details in obma_properties and obis_properties
  This topic provides the instructions to update machine details in obma_properties and obis_properties.
- Verify Run List
  This topic provides information on Verify Run List.
- Install ORC on machine
  This topic provides information on Install ORC on machine.
- Login
  This topic provides information on Login.
- Run Installer
  This topic provides information on Run Installer.
- Verify OBMA Installation
  This topic provides the instructions to verify OBMA Installation.
- Verify Run List in Scratch
  This topic provides the instructions to verify Run List in Scratch.

1.1.1 Prerequisites

This topic provides information on prerequisites of installation.

1. Set bash shell and configure the proxy.
2. Make sure `yum` is up to date on the machine.

   To ensure that, run the following command `yum update yum`.
3. Verify that the system date and time are correct and up to date.
4. FCIS system and REST service should be ready and in a running state.

   FCIS schema's default password is displayed and it is highly recommended to change the default password.
5. Set the FCIS schema custom password by referring to the *Databag* topic.

   Refer to the table for Pre-requisites schema.

Table 1-1 Prerequisites

Software	Version	Description / filename
JAVA (Version: jdk-17.0.12 and above)	Refer latest FCIS Release Notes	Download from Oracle
Database	Refer latest FCIS Release Notes	Download from Oracle
Weblogic (Version: 14.1.2.0.0)	Refer latest FCIS Release Notes	Download from Oracle
Product WAR Files	-	Download from Installer
ORC	-	Download from Installer

1.1.2 Database Installation

This topic provides information on 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.

1. Create required database schemas with TABLE SPACES.

   Example: PLATO, PLATOUI, PLATOSEC, PLATOFEED, PLATOBATCH, PLATOORCH ,CMNCORE, SMS, PLATOALERTS, REPORTSERVICE, OBPYBPROC, PARTY, PLATOTRANSPORT, PLATORULE.

2. Set the custom password by referring to the *Databag* topic.

   The Default password is displayed and it is same for all the above schemas and it is highly recommended to change the default password. The same password will be used for JNDI creations.

3. During FCIS installation, if you click the **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 `grantScript.sql` for granting privileges.

4. Create the following table within the **PLATOORCH** schema that was created in the previous step.

```
CREATE TABLE task_config AS SELECT * FROM PLATO_TM_TASK_CONFIG;

Alter table task_config drop column MOD_NO;

Alter table task_config drop column AUTH_STAT;

Alter table task_config drop column RECORD_STAT;

Alter table task_config drop column ONCE_AUTH;

Alter table task_config drop column MAKER_ID;

Alter table task_config drop column MAKER_DT_STAMP;
```

```
Alter table task_config drop column CHECKER_DT_STAMP;
Alter table task_config drop column MAKER_REMARKS;
Alter table task_config drop column CHECKER_REMARKS;
```

1.1.3 Downloading Installer

This topic provides information on downloading Installer.

Perform the below steps to download the installer:

1. Create Linux OS User (example: obmauser).
2. Open **PuTTY** and log in to the VM (where installation is planned) with OS user (Examples include obmauser, wls1114, and others).
3. Create a directory **obma_installer** in /scratch.
   - **mkdir -p /scratch/obma_installer**
   - **chmod -r 755 /scratch/obma_installer**
4. Create a directory **OBMA/report-service/output** in /scratch.
   - **mkdir -p OBMA/report-service/output**
   - **chmod -r 755 OBMA/report-service/output**
5. Download the respective installer from shipment **OBMA_INSTALLER** folder to **obma_installer** directory.

1.1.4 Downloading Software

This topic provides information on downloading Software.

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

1. cd /scratch/obma_installer/softwares/java
2. cd /scratch/obma_installer/softwares/kafka
3. cd /scratch/obma_installer/softwares/orc-infra
4. cd /scratch/obma_installer/softwares/wls
5. cd /scratch/obma_installer/softwares/wls_patch
6. cd /scratch/obma_installer/softwares/zookeeper

1.1.5 Downloading Applications (Domains) Related WAR Files

This topic provides information on 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.

Table 1-2 Folder Structure

Folder Name	Download Location
/scratch/obma_installer/deployables/apps/cmc	Installer → COMMONCORE1
/scratch/obma_installer/deployables/apps/sms	Installer → SMS

Table 1-2 (Cont.) Folder Structure

Folder Name	Download Location
/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.

1.1.6 Update Machine details in obma_properties and obis_properties

This topic provides the instructions to update machine details in obma_properties and obis_properties.

1. Update OS **cd /scratch/obma_installer/chef-repo** user name manually in same obma_properties.rb

   ```
   INSTALL_USER = "<OS_USER>"
   ```

   ```
   INSTALL_GROUP = "<OS_USER_GROUP>"
   ```

2. Update proxy manually in same obma_properties.rb

   ```
   http_proxy = "http://<PROXY_HOST> "
   ```

   ```
   https_proxy = "https:// <PROXY_HOST> "
   ```

3. 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>
   ```

4. Update Database details manually in same obma_properties.rb

   ```
   ORACLE_PDB_SID = "<FCIS_DATABASE_NAME>"
   ```

   Example : FCIS147PDB

   ```
   ORACLE_PDB_HOSTNAME = "<HOST_NAME>"
   ```

5. Update LDAP details manually in same obma_properties.rb

   ```
   LDAP_HOST = "<HOST_NAME>"
   ```

6. Update OBIS_SCHEMA details manually in same obma_properties.rb

   ```
   OBIS_SCHEMA = "<FCIS_SCHEMA>"
   ```

Example: DISTBITRENV

7. 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_N
AME>"
```

1.1.7 Verify Run List

This topic provides information on Verify Run List.

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[obm
a_java:
          :create_certs]','recipe[obma_zookeeper]','recipe[obma_kafka]','recip
e[obma_weblogic
          ::install_wls]','recipe[obma_weblogic::install_wls_patch]','recipe[o
bma_weblogic::do

main]','recipe[obma_weblogic::startadmin]','recipe[obma_weblogic::startnm]','r
ecipe[

obma_weblogic::configureembaddedwlsldap]','recipe[obma_weblogic::ssl_admin]','
re

cipe[obma_weblogic::stopadmin]','recipe[obma_weblogic::ssl_nodemanager]','reci
pe[

obma_weblogic::restartadmin]','recipe[obma_weblogic::cluster]','recipe[obma_we
blo

gic::addjdbcconnections_plato]','recipe[obma_weblogic::setuseroverridesupdate_
plato
          ]','recipe[obma_weblogic::startman]','recipe[obma_weblogic::deployap
p]']
```

1.1.8 Install ORC on machine

This topic provides information on 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 the 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.

1.1.9 Login

This topic provides information on Login.

Log in using root user on Linux machine, **sudo su root**

1.1.10 Run Installer

This topic provides information on Run Installer.

Run installer command after logging using root user.

cd /scratch/obma_installer/chef-reposh obma_installer.sh

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

1.1.11 Verify OBMA Installation

This topic provides the instructions to verify OBMA Installation.

1. Verify OBMA foundation installation completed.

   cd /scratch/obma_installer/chef-repo obma_installer.log

2. Check message is present at end as **ORC Infra Client finished**.
3. Verify that all service is running and active state in weblogic.

   OBMA Foundation Installation is completed.

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

1.1.12 Verify Run List in Scratch

This topic provides the instructions to verify Run List in Scratch.

1. 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_cert

s]','recipe[obma_zookeeper]','recipe[obma_kafka]','recipe[obma_weblogic::in
stall_wls]','recipe[o

bma_weblogic::install_wls_patch]','recipe[obma_weblogic::domain]','recipe[o
bma_weblogic::star

tadmin]','recipe[obma_weblogic::startnm]','recipe[obma_weblogic::configuree
mbaddedwlsldap]','

recipe[obma_weblogic::ssl_admin]','recipe[obma_weblogic::stopadmin]','recip
e[obma_weblogic:
         :ssl_nodemanager]','recipe[obma_weblogic::restartadmin]','recipe[o
bma_weblogic::cluster]','reci

pe[obma_weblogic::addjdbcconnections_plato]','recipe[obma_weblogic::setuser
overridesupdate

_plato]','recipe[obma_weblogic::startman]','recipe[obma_weblogic::deployapp
]']
```

2. Check which job is failed, remove the successful job and run again.

2

Cleanup and Reinstalling setup post failed Installation

This topic provides information on Cleanup and Reinstalling setup post failed installation.

1. Open the Admin console of the respective setup.
2. Shut down all the managed servers.
3. After shutting down all the managed servers, proceed to shut down the Admin Server.
4. Open PuTTY and log in to the appropriate setup using the local user credentials. (That is, ofssobp).
5. Terminate the Node Manager, along with any other applications like Kafka, Zookeeper, and others, if they are installed on this VM.
6. Check the status of all the servers using the command below.

   There should be no server processes running.

   - **ps -aef | grep AdminServer**
   - **ps -aef | grep NodeManager**
   - **ps -aef | grep kafka**
   - **ps -aef | grep zookeeper**

   > **Note**
   >
   > The above commands are for reference only.

7. Navigate to the scratch directory by running the command `cd /scratch`.
8. Use the command `ls -lrt` to list the files and directories.
9. Delete the directories ssl, app, extract, obma and work_area by executing the command `rm -rf ssl app extract obma work_area`.

   > **Note**
   >
   > Please exercise caution before executing this command. Additionally, you may rename these directories or move them out of the scratch directory before proceeding with the fresh installation.

10. Rerun the installer as outlined in the respective *installation* document.
    - Log in to **WebLogic Remote Console** and connect to the host.
      - **Username** : Username of the console
      - **Password** : Password of the console
    - Check all the servers are in running state.

- Check Datasources are properly mapped with corresponding schemas.
- Ensure that all wars are deployed correctly, except for the OBIS wars.

3 Day 0 Scripts

This topic provides information on Day 0 Scripts.

Perform the below steps to Day 0 Scripts:

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

   Ex : /scratch/obma_installer/Day0Script

   - 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.
2. Check out **PLATOUI_Day0_Script.sql** which is also available in the same shipment installer path.
   - Run the SQL script in PLATO UI schema.
   - **Example**: `UPDATE PRODUCT_SERVICES_ENV_LEDGER SET URL = REPLACE(URL, '8006', '8082');`
   - After replacing the above property, run this SQL script in PLATOUI Schema.
3. Check out **ERTB_MSGS_Day0_Script.sql** which is also available in same shipment installer path.

   Run this SQL script in FCIS Schema. Example : DISTBITRENV

   > **Note**
   >
   > Please make sure Release Configuration should not be enabled in WebLogic.
4. Execute the obis_installer.

   cd /scratch/obma_installer/chef-reposh obis_installer.sh

   It will take around 20 mins to complete obis setup.
5. Verify OBIS installation completed.

   cd /scratch/obma_installer/chef-repo obis_installer.log

   > **Note**
   >
   > Use the encryption utility provided at Section **Encryption Logic**.

4

Encryption Logic

This topic explains about the process of 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

1. **Usage**: java -jar plato-security-toolkit-9.1.0.jar
2. **Enter pass phrase**: Test123
3. **Enter Salt**: 0.9412345671234567
4. **Encrypted Password**: m4Q1rbtegkWse2s7D2jKfw==

Encryption of salt:

To encrypt the salt as per Oracle Standards, we recommend toolkit - plato-security-salt-encryption-toolkit

1. **Usage**: java -jar plato-security-salt-encryption-toolkit-9.1.0.jar
2. **Enter Salt**: 0.9412345671234567
3. **Encrypted Password**: VmtjMWQxTnJOVlpPV0VaWFZrVndUMWxYTVU1bFJsSlpZMFZLYTFaVVZrWldWbWgzVkRGS1JsWnFVVDA9

5
Data Bag

This topic explains about the process of Data Bag.

This topic has the following sub-topic:

- Updating passwords in databag
  This topic explains about the process of updating passwords in databag.

5.1 Updating passwords in databag

This topic explains about the process of updating passwords in databag.

1. Launch putty and log in to product VM with NIS user (Example: 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>

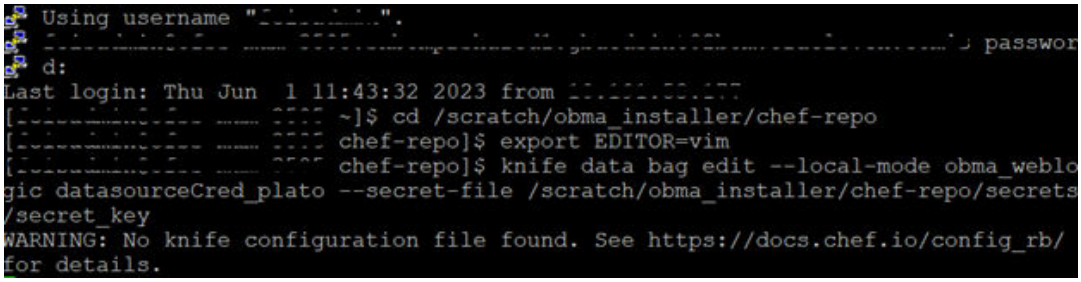
Table 5-1 Attribute Details

Attribute Name	Attribute Description
databag_sub_directory	Name of sub directory where the datasource credential json file is located inside databag directory. **Example**: 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. **Example**: datasourceCred, datasourceCred_plato **Note**: Here mention the filename without the .json extension.
secret_key_path	Location to the secret key. **Example**: /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

Figure 5-1 Example on Data Bag

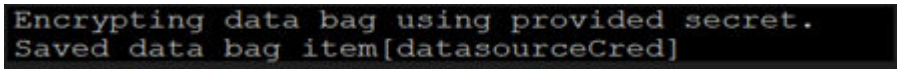


5. Key attribute **OBIS** password should be same as FCIS schema password.

Figure 5-2 OBIS password

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

Figure 5-3 Save Data Bag



6

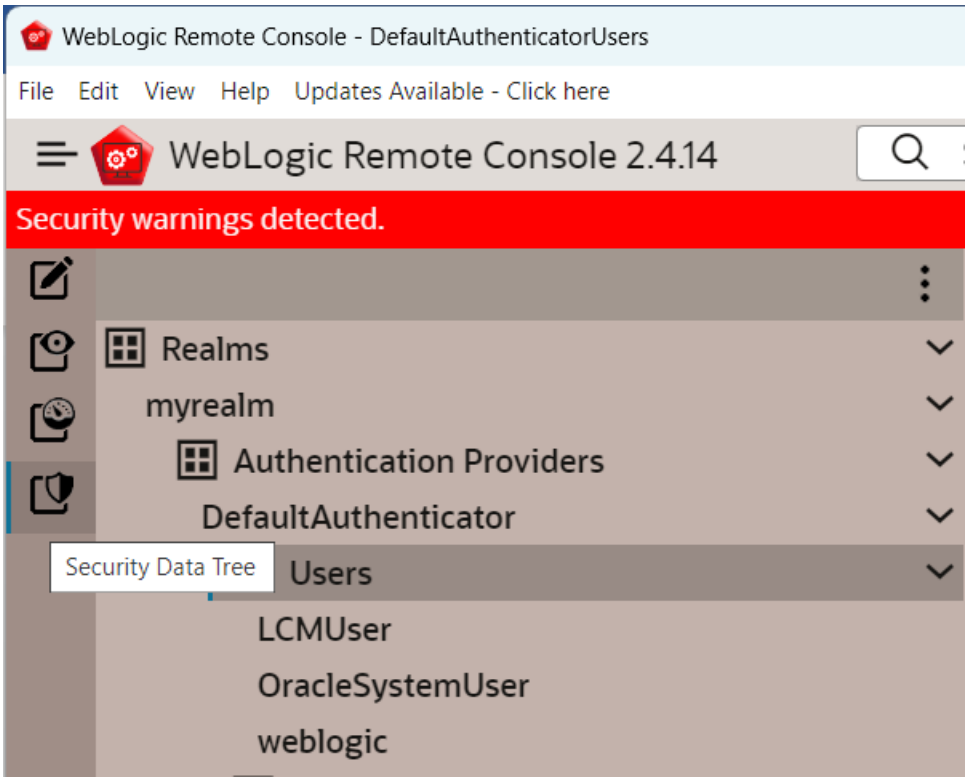
Create User in WebLogic

This topic provides the instructions to create user in WebLogic.

1. Log in to **WebLogic Remote Console**.
2. Go to **Security Data Tree** and select **Realms**. Select **myrealm** within and click **Authentication Providers**.
3. Select **DefaultAuthenticator** and click **Users**.

   The **Security Data Tree** with options to create **Users** is displayed.

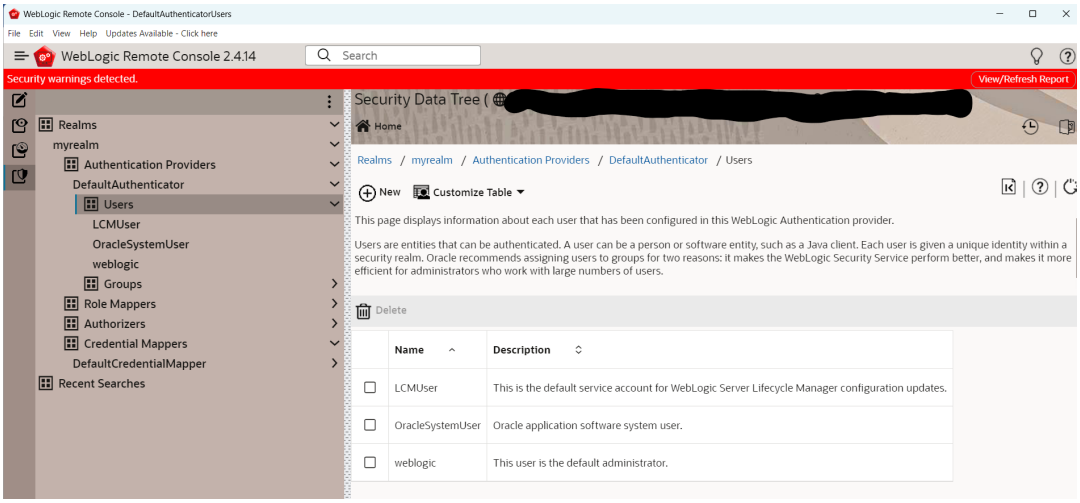
Figure 6-1 WebLogic Remote Console_DefaultAuthenticatorUsers



4. Click **New** to create a new User.

   The Home Page with the option to create Users is displayed.

Figure 6-2 WebLogic Remote Console_Create Users



5. Specify the username as MEADMIN1, set a password, and save the user details.
6. Create the MEADMIN2 user by following the same steps as for MEADMIN1.
7. Log in to the Application `https://<HOST_NAME>:8006/app-shell/` with MEADMIN1 user, and create SYSADMIN1 and SYSADMIN2 as System Administrators for the application.
8. Log in with SYSADMIN1 Admin user and create a new role named **ADMIN_ROLE**.
9. Identify and map the functional activities associated with the ADMIN_ROLE to enable screen access.
10. Create TESTUSER1 with the Maker role and TESTUSER2 with the Checker role, then map the ADMIN_ROLE to each user.

7

Annexure

This topic provides the information about Annexure.

Refer the shipment for the scripts.