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MLEB Software Suites
Mobile Corporate Banking Installation Guidelines
(Version 0.4)

Confidentiality

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Document Information

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Document Revision History

Version #	Revised By	Revision Date	Descriptions
0.1	Woon Kok Choon	13 Sept 2019	1. First version of document.
0.2	Woon Kok Choon	19 Sept 2019	1. Include JVM Environment Setup - section 9.2
0.3	Alex Loo	25 Sept 2019	1. Include Push Notification Setup
0.4	Shafiqah Rahni	24 Nov 2023	1. Update Library for Java 8 - Section 7 - Section 9.1

Document Release History

Release #	Release Date	References

Document Approval History

Name	Designation	Date

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1. Overview

1. This document records the following information with the aim to provide a single point of reference and up to date information for the target audiences.

2. This MLEB MBK installation process consists of the following phases:

   a.) MLEB DB script setup
   b.) WebLogic share library setup
   c.) MLEB properties setup
   d.) WebLogic application environment setup
   e.) MLEB application deployment

2. Target Audience

1. Development Team

2. System Integration / Implementation Team

3. Application support

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3. References

No.	References	Details
1.	Weblogic	1. https://docs.oracle.com/en/
2.	Oracle DB	1. https://docs.oracle.com/en/

Table 1 List of References

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4. Terminology and Conventions

No.	Definitions	Description
1.	MLEB	1. Mobility Lifestyle Ecosystem Backbone
2.	SMECO	1. Silverlake Mobility Ecosystem
3.	JRE	1. Java Runtime Environment

Table 2 List of Definitions

5. Abbreviations

No.	Abbreviations	Description
1.		
2.		

Table 3 List of Abbreviations

6. MLEB DB Script Setup

1. Putty to DB server
2. Login to sqlplus
3. Run the script file by entering command below:
4. @<sql_script_file>
5. Example
   @mleb_script.sql

7. WebLogic Share Library Setup

1. The share library consist of jar file as listed below:
   a. antlr-2.7.6.jar
   b. cglib-2.2.jar
   c. commons-collections-3.2.1.jar
   d. dom4j-1.6.1.jar
   e. hibernate-commons-annotations-5.0.1.Final.jar
   f. hibernate-core-5.2.10.Final.jar
   g. hibernate-entitymanager-5.2.10.Final.jar
   h. hibernate-jpa-2.1-api-1.0.0.Final.jar
   i. javassist-3.12.0.GA.jar
   j. jta-1.1.jar
   k. slf4j-api-1.7.2.jar
2. Before you begin, Silverlake will provide All the jar file in a folder called "lib-jpa".
3. FTP/Upload the lib-jpa folder to the WebLogic Application domain lib folder
4. Example path (*after upload):

```
[administrator@UAT-MBANKING-APP lib-jpa]$
[administrator@UAT-MBANKING-APP lib-jpa]$ pwd
/app/oracle/middleware/user_projects/domains/mleb/lib/lib-jpa
[administrator@UAT-MBANKING-APP lib-jpa]$ ls -l
total 5896
-rwxrwxr-x 1 administrator administrator  443432 Dec  2  2015 antlr-2.7.6.jar
-rwxrwxr-x 1 administrator administrator  278682 Dec  2  2015 cglib-2.2.jar
-rwxrwxr-x 1 administrator administrator  575389 Jul 18  2009 commons-collections-3.2.1.jar
-rwxrwxr-x 1 administrator administrator  313898 Nov 13  2014 dom4j-1.6.1.jar
-rwxrwxr-x 1 administrator administrator   71283 Dec  2  2015 hibernate-commons-annotations-3.2.0.Final.jar
-rwxrwxr-x 1 administrator administrator 3123360 Jan 20  2016 hibernate-core-3.6.10.Final.jar
-rwxrwxr-x 1 administrator administrator  426671 Jan 20  2016 hibernate-entitymanager-3.6.10.Final.jar
-rwxrwxr-x 1 administrator administrator  102661 Dec  2  2015 hibernate-jpa-2.0-api-1.0.1.Final.jar
-rwxrwxr-x 1 administrator administrator  633312 Dec  2  2015 javassist-3.12.0.GA.jar
-rwxrwxr-x 1 administrator administrator   15071 Dec  2  2015 jta-1.1.jar
-rwxrwxr-x 1 administrator administrator   26083 Jun 30  2014 slf4j-api-1.7.2.jar
```

8. MLEB MCB Properties Setup

1. Silverlake will provide All the application properties in a folder called "properties"
2. FTP/Upload the properties folder to Application Server directory "/home/<user>/ocbc/apps/
3. Example path (*after upload)

```
[oracle@uat-app-mleb ~]$ cd ocbc/apps/properties/
[oracle@uat-app-mleb properties]$ ls -l
total 12
-rw-r--r-- 1 oracle oinstall  320 Aug 29 15:45 ccmcb.properties
-rw-r--r-- 1 oracle oinstall  378 Aug 19 12:00 mcb.properties
-rw-r--r-- 1 oracle oinstall 1773 Apr 29 13:41 mleb.properties
[oracle@uat-app-mleb properties]$
```

If need to deploy ccmcb app to another WebLogic server, the ccmcb.properties required to move to another WebLogic server with same location.

4. Include System Properties setting in server start Arguments :

    -Dapp.store.path=/home/oracle/ocbc/apps

    -Dapp.log.path=/home/oracle/ocbc/logs

Arguments:

```
XX:+ScavengeBeforeFullGC -XX:+CMSScavengeBeforeRemark -
Dsun.net.inetaddr.ttl=60 -
Dapp.store.path=/home/oracle/ocbc/apps -
Dapp.log.path=/home/oracle/ocbc/logs/ServerCcws1 -
Dhb.dialect=org.hibernate.dialect.Oracle10gDialect -
Dweblogic.threadpool.MinPoolSize=5 -
```

9. WebLogic Application Environment Setup

9.1 Configure WebLogic Domain environment

1. Open WebLogic setDomainEnv.sh using putty
2. Example : vi <weblogic_home>/user_project/domain/<application>/bin/setDomainEnv.sh
3. Add the command below: (replace the <user> to the owner of the WebLogic server)

```
export CLASSPATH=$CLASSPATH:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/antlr-2.7.6.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/cglib-2.2.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/commons-collections-3.2.1.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/dom4j-1.6.1.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/ hibernate-commons-annotations-5.0.1.Final.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/ hibernate-core-5.2.10.Final.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/ hibernate-entitymanager-5.2.10.Final.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/ hibernate-jpa-2.1-api-1.0.0.Final.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/javassist-3.12.0.GA.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/jta-1.1.jar:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/slf4j-api-1.7.2.jar
```

4. Example(*after added the command):

```
#!/bin/sh

# WARNING: This file is created by the Configuration Wizard.
# Any changes to this script may be lost when adding extensions to this configuration.

# --- Start Functions ---

export CLASSPATH=$CLASSPATH:/app/oracle/middleware/user_projects/domains/velomobile/lib/lib-jpa/antlr-2.7.6.jar:/app/oracle/middleware/user_projects/do
BP=100
SP=$BP

pushd()
{
    if [ -z "$1" ]
    then
        return
    fi

    SP=`expr $SP - 1`
    eval _stack$SP=`pwd`
    cd $1
    return
}

popd()
```

9.2 JVM Configuration

1. Include **ccmcb** managed server JVM setting in server start Arguments :

   -Xms1024m -Xmx2048m -XX:PermSize=512m -XX:MaxPermSize=1024m

2. Include **mcb** managed server JVM setting in server start Arguments :

   -Xms2048m -Xmx4096m -XX:PermSize=512m -XX:MaxPermSize=1024m

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9.3 Enable Secure HTTP port (HTTPS)

1. Login to WebLogic console
2. Go to the path > Environment > Servers >AdminServer
3. Check the SSL Listen Port Enabled
4. Save and Active the changes
5. Example :

Home >Summary of Environment >Summary of Servers >**AdminServer**

Settings for AdminServer

| Configuration | Protocols | Logging | Debug | Monitoring | Control | Deployments | Services | Security | Notes |

| General | Cluster | Services | Keystores | SSL | Federation Services | Deployment | Migration | Tuning | Overload |

Save

Use this page to configure general features of this server such as default network communications.

View JNDI Tree

Name:	AdminServer
Machine:	(None)
Cluster:	(Standalone)
Listen Address:	
☑ **Listen Port Enabled**	
Listen Port:	7001
☑ **SSL Listen Port Enabled**	
SSL Listen Port:	7002

9.4 Configure WebLogic Data Source

1. Login to WebLogic Console
2. Go to the path Service > Data Sources
3. Click New and Choose Generic Data Source

4. Configure Name and JNDI NAME as below:
   Name : JDBC MLEB
   JNDI Name : jndi/mleb

5. Click Next
6. Choose the Oracle's Driver(Thin XA) for Instance connections;Version:Any
7. Click Next until the Connection Properties page
8. Fill in below:
   Database Name : <oracle DB name>
   Host Name: <oracle hostname/IP>
   Port: <oracle DB port>

Database username: <DB username>
Password: <DB password>
Example:

9. Click next , then click finish.
10. Save and Active the changes.
11. Repeat above all the step to configure another data source
    Datasource details :

    Name : JDBCSESSION
    JNDI Name : JDBCSESSION
    Database : SESSION_OCBC
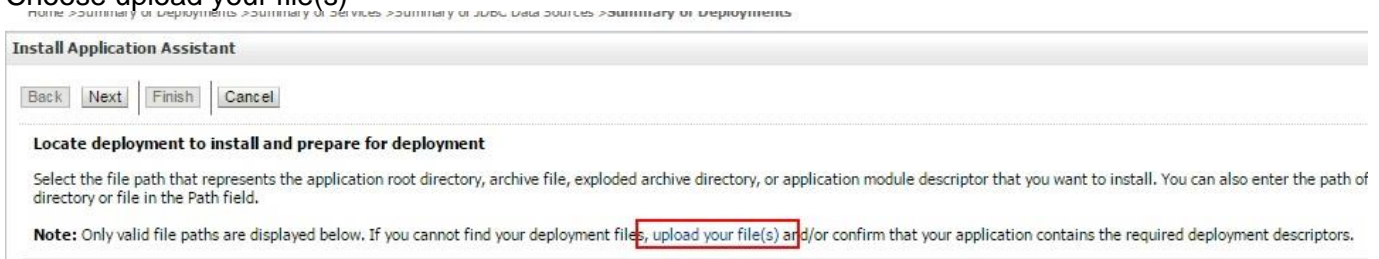
Data Sources (Filtered - More Columns Exist)

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

☐	Name ⌃	Type	JNDI Name	Targets
☐	JDBCSESSION	Generic	JDBCSESSION	ServerMleb, ServerCcws
☐	MLEB JDBC	Generic	jdbc/mleb	ServerMleb, ServerCcws

12. Targets should point to **ccmcb** and **mcb** managed server

10. MLEB Application Deployment

1. Login to WebLogic console
2. MLEB Application consist of ccmcbs.war,mcb.war,mleb_core.war, pns.war
3. Do repeat the step below for all the application deployment.
4. Click on Deployments
5. To install new app, click install button
6. To update existing app, select/check the application and click update
7. Choose upload your file(s)

Install Application Assistant

Back   Next   Finish   Cancel

Locate deployment to install and prepare for deployment

Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can also enter the path of directory or file in the Path field.

Note: Only valid file paths are displayed below. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.

8. Click upload Deployment Archive, and select MLEB application war/ear file and click next to upload.
9. Click next or finish button to complete the deployment step.
10. Click save and active the changes.
11. If the deployed application state is not active, select/check the application and click on start and choose servicing all request.

11. PNS Setup

11.1 PNS SQL Script

Run the following script into existing MLEB_PNS schema.

Run the following script into existing MLEB_PNS schema. -- To avoid duplicate run
DELETE FROM MLEB_PNS.MLEB_PNS_APPS WHERE APP_ID='ocbcvelo';
-- Insert pns record for mcb
INSERT INTO MLEB_PNS.MLEB_PNS_APPS (APP_ID, ANDROID_API_KEY, ANDROID_MSG_TEMPLATE,
APPLE_CERT, APPLE_IPAD_CERT, APPLE_IPAD_PASS, APPLE_PASS, STATUS, APP_PASS, APPLE_URL)
SELECT 'ocbcvelo', '<android_api_key>', 'template', '<apple_cert_path>', '<apple_cert_path>',
'<apple_cert_password>', '<apple_cert_password>', 'ACTIVE', APP_PASS, APPLE_URL FROM
MLEB_PNS.MLEB_PNS_APPS WHERE APP_ID='ocbc';

Parameters:

android_api_key = Production android API key.

apple_cert_path = Apple certification path in the server.

apple_cert_password = Apple certification password

11.2 Apple Certification

The apple certification have to load to all PNS server where the war is running.

The path of the certification have to in sync with **apple_cert_path**

11.2 PNS Web Service

IP: <Same as existing OneMobile MLEB PNS endpoint for production>

Port: <Same as existing OneMobile MLEB PNS endpoint for production>

AppID: ocbcvelo

AppPass: <Same as existing OneMobile MLEB PNS app pass>

Channel: P

MessageType: VELOMOBILEPUSH